THE ELEMENTS OF LOGICK

By

PETER DV MOYLIN.

Tranſlated out of the *French* Copie by

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With the Authors approbation.

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TO THE RIGHT VVorſhipfull, *Robert Debney*, Eſquire, Maior of the Citie of *Norwich*, Sir *Thomas Hyrne*, Knight, Sir *Peter Gleane*, Knight, and the *reſt of the Worſhipfull Iuſtices of* Peace, with the Sherifs and Aldermen of the Citie of *Norwich*.

Right Worſhipfull and right Worthy SENATORS;

SOme ignorant People imagining *Logick* to be nothing elſe but a kind of Sophiſtrie to deceiue the ſimple, haue not

ſpared to caſt aſperſions vpon this noble Art, and alſo vpon the publick Schooles where it is taught; affirming that ſuch as were ſent thither did but learne to turne *white* into *black*, & *black* into *white*, to ſerve their owne purpoſes, and to make people beleeue what they liſt. I wiſh that ſuch men would take the paines to reade over this Booke, or at leaſt conſider but the *definition* and *nature* of *Logick* here ſet downe in the very firſt lines of the ſame, and then I ſuppoſe they will eaſily perceiue that they haue but ſmall reaſon to ſpeake againſt the *rule* of reaſon. The beſt things may be abuſed; and ſo may *Logick* by a contentious caviling ſpirit: but the fault is not to be imputed to the *thing*, no more then drunkenneſſe to good Wine; but to the *perſon*, as good meates are corrupted by a bad ſtomacke, or ſweet

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oyle by a ſtinking veſſell For *Logick* teacheth not to practice quirkes and deceits, but to diſcover and avoyde them; as the laſt lines of this booke doe ſhew.

All Iudicious Authors both ſacred and prophane haue ever honoured this Art, and endowed it with right noble Titles. They haue ſtyled it the *Art of Arts*, the *ſcience of ſciences*, the *learning of learnings*, the *chiefe of all knowledges*, the *inſtrument of inſtruments*, the *hand of Philoſophy*, an *Art ſent from God*, yea and ſaid that *God himſelfe is* διαλεκτικώτατος, *the beſt Logician*: for indeed He is the beſt and trueſt Rule of all *reaſon* and *vnderſtanding*. Which being *that facultie* that *Logick* laboureth to perfect, this Art is ſo much more excellent then all other *Arts* and *Sciences*, by how much the *vnderſtanding*

Dounhami Orat: ad auditores.

ſurpaſſeth other *faculties* and *powers* of ſoule and bodie. It is the *mould* and *frame* into the which all other Arts and Profeſſions muſt be caſt, and without which they are no arts. It frames *it ſelfe* and *them*, and trieth them all by the infallible Rules of *Truth*, *Iuſtice*, and *Prudence*, termed by the Greekes κατὰ πάντος, καθ' αὑτὸ, and καθόλυ πρῶτον. It is the liuely ſpring of *invention*, the tribunall of *iudgement*, and the beſt Art of *memorie*. And ſay that a man be of the ſoundeſt braine and beſt naturall parts that can be, yet he may be bettered by this Art of *Logick*. For Art perfects Nature. And indeed without this helpe, nothing can be ſo *wittily* and *readily* inuented, nor ſo *truely* and *confidently* affirmed, nor ſo *methodically* and *orderly* diſpoſed, nor ſo *well* and

ſafely

safely remembred. This is the onely Art which diving into the depth of mans vnderstanding, teacheth *how to teach*, and *how to learne*, and makes a man *know that he knoweth*; as the eye seeth that it doth see, by reflection vpon a looking Glasse.

Now considering that every man hath a speciall interest in the vse of naturall reason, why should any man envie another the *sight* and *knowledge* of this Art, which should direct it. The learned Author having long since published a very excellent *Logick* in *Latin* for the Schooles, hath notwithstanding thought it not amisse to giue his Countrymen this other in their *vulgar Language*. I hope therefore that sheltring my selfe vnder the Shield of so judicious a *Precedent*, I shall easily escape the darts

darts of ſuch as would carpe at this my Tranſlation of it out of the *French* into *Engliſh*; ſeeing it may as well profit the *Engliſh* as the *French*. And howſoever our Country wanted not this Art alreadie in *Engliſh*, yet the more Candles the better light. I will not heere enter vpon the commendation of this learned man, or of his Worke: I ſhould but leſſen his worth by the meaneſs of my perſon and skill, and as it were light a Candle to the Sunne.

I had rather turn my ſpeech vnto *You*, (worthy *Senators*,) vnto whom I haue emboldened my ſelfe to Dedicate theſe firſt fruits of my Studies, hūbly entreating your *Worſhips* to accept of this my poore labour, as a publicke teſtimony of my deſire to bee thankefull vnto you all, for that it

it pleaſed your worthy Senate-houſe to chooſe me out of your *Grammer Free-Schoole*, & to ſend me as your poore Scholar to *Corpus Chriſti Colledge* in *Cambridge* in the yeare 1618. Thus craving pardon for my boldneſs, hoping your kinde acceptance, I ſhall ſtill pray for your *Worſhips* long liues, and happie gouernement of this famous Citie, reſting

Your Worſhips *in all Chriſtian dutie to be commanded,*

NATHANAEL DE-LAVYNE.

The Authors Epiſtle.

TO MY LORD FREDERICK MAVRICE *de la Tour*, Prince of *Sedan*; Sonne and heire of the high and mightie Prince HENRY *de de Tour*, Duke of *Bouillon*, firſt Marſhall of FRANCE, &c.

MY LORD,

That which the hand is among Inſtruments, the ſame is Logick *among other Arts and Sciences. For*

For as the hand is a generall Inſtrument that handleth all other inſtruments: So Logick *is a generall Inſtrument, the knowledge whereof ſerveth to handle all other knowledges, and to make a skilfull uſe of them. And as it is the propertie of Art to poliſh and perfect Nature: So it is the propertie of this Art to poliſh and direct naturall reaſon. For there is a certaine naturall* Logick, *which man uſeth naturally, without any art; even the unlearned ſort will ſometimes make a Syllogiſme unawares. But Philoſophie, having ſearched out all the ſecrets of naturall reaſon, hath obſerued the cauſes of a good Diſcourſe, and hath ſet downe rules to that purpoſe.*

Wherein appeareth the excellency of this Art aboue the reſt. For ſeeing that man is diſcerned from a beaſt by the uſe of reaſon: other Arts and Sciences frame man as he is a Ci-

Citizen, or a Magiſtrate, or a Lawyer, or a Phyſician; but Logick *frameth man as he is man, and maketh him after a ſort a more reaſonable creature by the right vſe of reaſon.*

But this Art hath chanced to fall into bad hands, that haue robbed it of her naturall ornaments, and by a ſtrange Metamorphoſis haue turned it into a fagget of dry thornes, which pricketh on every ſide; and in ſtead of drawing the rules thereof from naturall reaſon, and fitting them for the vſe of man; they haue entangled it with Metaphyſicall queſtions, which are like vnto Crabs, where there is much pickling, but little meat, and are for no vſe, neither civill, nor religious.

This inveterate evill, which by cuſtome is turned into nature, would require a skilfuller Phyſician, and a quieter minde then mine is now, and a calmer ſeaſon then this

this wherein we are. Notwithſtanding being caſt vpon this place by the tempeſt, as a plancke of the generall ſhipwracke, and brought to a ſorrowfull reſt, I haue beſtowed certaine houres vpon this Worke, and haue endeuoured to giue a milder looke and countenance to this Art, plucking thoſe thornes from it, which it had gotten in the Schooles; and cloathing it with a French *habit, that it might no longer walke in* France *like a ſtranger. For theſe many Ages paſt it hath beene commonly taught in a moſt barbarous and thornie Latin, as if ſweetneſſe and elegancie could not ſtand together with ſolliditie.*

If the publicke receiue any benefit out of this my labour, it ſhall be wholy beholding to my Lord the Duke your Father for it. Who hauing receiued mee into his houſe, and giuen me a fauourable entertain-

tainment, with all kinde of reſpect and benefits, hath exhorted mee to vndertake this taske, and to teach you the Precepts thereof; wherein I haue taken a ſingular delight. For, beſides that it was a great honour to mee to doe you any ſervice, it hath alſo given mee the occaſion to try your wit; which I haue obſerued to be endowed with a ſtrong imagination, and a ſolide iudgement, and which is not diſcouraged through difficulties: and by a laudable curioſitie will not be ſatisfied but with reaſon, and where the ſame is not evident enough, mooveth doubts of it ſelfe. Whence it is eaſie to conceiue how great the dexteritie of your wit will be, when time and neceſſitie ſhall give you occaſion to make vſe of it in things of a higher and more important nature.

The feare of God being ioyned to this so quick and iudicious a spirit, which hath planted in your heart a hatred of vice, and mooved it with a holy ambition, to consecrate your life to the service of God, what may wee not hope of such a disposition, which God hath so greatly favoured? especially considering that you are brought up in a familie, whence all bad examples, and all idle words are banished, and where the service of God is carefully maintained: and haue before your eyes the example of my Lord your Father, who among Princes *is a notable patterne of wisedome, of great experience, of singular vnderstanding, and of wise gouernement: whose courage rouseth it selfe against aduersitie, and whose minde is not daunted through affliction. To whom nature hath giuen more than others*

haue

haue gotten by ſtudie and induſtrie, having a naturall facilitie to compaſſe that, which others by long meditation cannot attaine vnto. Whoſe words are to you as daily leſſons, and his wiſe actions as a continuall patterne.

He it is from whom you haue receiued, that Learning is a goodly ornament to a Prince. Becauſe he that guides others muſt haue the clearer ſight; and that hee muſt haue moſt knowledge, that hath moſt imployment. There being nothing more vnbeſeeming a Prince, then, to bee inferiour to the moſt part of his Subiects in vnderſtanding and good knowledge, and to owe all the preferment he hath to his birth, and nothing to his vertue; and who to iudge aright of things, muſt ſearch into another mans braine for that which hee

ſhould finde in his owne. This happeneth vnto ſuch Princes as haue ſpent all their younger yeares in learning how to manage horſes, rather then to governe the mindes of men, who are creatures a thouſand times more vnruly and vntamed. Whoſe outword behaviour is taught, whileſt their ſoules are left vntaught: who imploy moneths and yeares in hunting after wilde beaſts, whileſt they themſelues are caught by domeſticall beaſts, that is to ſay, by flatterers, that intangle them in vices. Who are taught to liue, as if their Subiects were made for them, whereas they are made for the good of their Subiects; and to remember that they are Princes, but not to call to minde, that they are men ſubiect to the ſame infirmities: and that having receiued of God more graces then

then others, they haue the greater account to giue vp vnto him; and that being the image of God vpon earth, they ought to ſtriue to bee like vnto him, not onely in Iuſtice, clemencie, liberalitie, and fore-ſight; but chiefly in that GOD raigneth over his Subiects, not for his owne good, but for theirs.

Now when I ſpeake of Learning, I doe not meane a laborious knowledge, busying it ſelfe about words or ſwelling Diſcourſes, or about heaping vp of much Latin. But I am of opinion that the true learning of a Prince conſiſteth in the knowledge of God, and of the world, and of himſelfe, and of the affaires of his owne Eſtate and of his neighbours; and to be a Scholar of the dead, I meane, to ſearch in Hiſtories the examples of wiſedome;

and to learne the trade of a Prince, which is the hardeſt of all. Becauſe it is a hard matter to walke ſteadily vpon the top of a very high place, the braine of him eaſily turning that is very high mounted. And alſo becauſe the actions of Princes are moſt controuled, and their life moſt croſſed, and their faults moſt expoſed to view, and that they authorize vices by their example.

Theſe inſtructions, my **Lord**, *are familiar vnto you, and you want no domeſticall helps. Notwithſtanding I haue thought that you would not take it amiſſe, if I endeuoured to contribute ſomewhat thereunto: and that by this my labour, as by a ſmall euidence, I ſhould teſtifie my acknowledgment of the honour which I haue receiued of my Lord your Father, and how earneſtly I pray vnto*

vnto GOD for the proſperitie of your moſt illuſtrious houſe, and more particularly for your ſelfe, my Lord, *as being*

Your moſt humble

and moſt obedient ſervant,

DV MOVLIN.

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ERRA-

ERRATA.

PAge 42. line 19. for *by blunt hornes*, reade *by the blunt hornes*. p. 49. l. 23. for *Now*, r. *None*. p. 50. l. 13. for *and xe*, reade *an axe*. page 55. betweene line 10. and 11. put *Accidents into other Accidents*. p. 80. l. 7. for *certaine*, r. *contrary*.

THE ELEMENTS OF LOGICK.

The first Booke, which treateth OF SIMPLE NOTIONS.

The first Chapter.

What Logick *is. How many sorts of* Notions *there be in the minde of man.*

LOGICK is an Art which giueth rules to argue well, and to discerne truth from falshood.

To be able to form an argument, and to frame a good reason, we must

know, that all the Notions or Conceptions in mans vnderstanding are, either Simple, or Compound.

Simple Notions are such, as are expressed by one word onely; As, *horse, man, whitenes, to see, to runne*, &c.

Compound Notions are such, as are expressed by an Enuntiation or Proposition, which affirmeth or denieth something; As, *Man is reasonable. God is no lyar.*

Of many Propositions knit together, an Argument or Syllogisme is made, by those meanes and rules, which shall be set downe hereafter.

The second Chapter.

How many sorts of simple Notions there are. Of Things singular and vniversall. Also of Substance and Accident.

THere are as many simple Notions as there be things in the world.

Of Things some be singular, and some vniversall. Sin-

Singular things are thoſe, which are one in Number; As, *Frederick*, *Peter*, *this horſe*, *this tree*.

Vniverſall things comprehend and containe the Singulars. For an vniverſall is a gathering together of many Singulars vnder one nature common to all. As, *horſe*, *man*, *tree*, vnder which words conſidered in generall, wee comprehend all horſes, men, trees.

Singulars are knowne by ſenſe, but vniverſals are comprehended by the vnderſtanding. Therfore bruit beaſts know onely Singular things. Singulars in Philoſophie are called *Individuals*, becauſe they cannot be divided into two parts, keeping the ſame name. As, *Alexander* cannot be divided into two *Alexanders*, nor one *horſe* into two horſes.

A whole compounded of parts alike; As, *water*, *blood*, *wood*, are not called *Individuals*, becauſe they may be divided into parts, which may keepe the name of the whole. For every drop of water is water, and of a great peece of wood every parcell is

wood. But if you will turne these things into *Individuals*, you must add the name of the measure. For one pint of water cannot be divided into two pintes, nor one acre of ground into two acres.

All things, whether Singular or Vniuersall, are either Substances, or Accidents.

A Substance is that which subsisteth of it selfe; as, *man*, *water*, *earth*, &c.

An Accident is that which cannot subsist by it selfe, but must haue a subiect or substance to vphold it, and vnto which it must adhere; as, *whitenes*, *swiftnes*, *wisedome*, *heat*. For whitenes can haue no being if it subsisteth not in some subiect; as, in snow, or in the skinne: so heat is an accident to fire; swiftnes is an accident to an horse; wisedome is an accident to the vnderstanding.

Accidents are sometimes expressed by a Substantiue; as, *iustice*, *beautie*; and sometimes by an Adiectiue; as, *iust*, *faire*. In the first manner, accidents are called Abstracts, or Separated;

ted; In the ſecond, they are called Concretes, or Conjoyned. For he that names *iuſtice*, or *beautie*, conſiders juſtice or beautie without any certaine Subject. But he that names *iuſt* or *faire*, conſiders juſtice and beautie, as adhering to a certain Subject that is cloathed therewith.

Common cuſtome oft confounds theſe things, ſaying, *the true*, *the black*, *the ſweet*; in ſtead of ſaying, *the truth*, *the blackneſs*, *the ſweetneſſe*.

Now becauſe there are divers and ſundry kindes of accidents, the Philoſophers have ranked them into nine Orders or Claſſes of things; vnto which Subſtance being added, there are ten Claſſes, which the Philoſophers call Categories or Predicaments. So that there is nothing in the world which is done either by Nature, or by Art, by Counſell or Chance, which may not be referred to, and contained in ſome one of theſe Categories.

The third Chapter.

The Names of the ten Categories.

The ten Categories are these.

1. Substance; as, *man, horse.*
2. Quantitie; as, *length, breadth.*
3. Qualitie; as, *swiftnesse, whitenesse, roundnesse.*
4. Relation or Respect; as, to be *a Father*, or *a Sonne*, *a Master*, or *a Servant*, &c.
5. To Act, or Action; as, *to runne, to speake.*
6. To Suffer, or Passion; as, *to be driven, to be burned.*
7. Where; as, *here, there.*
8. When; as, *yesterday, to day.*
9. Situation; as, *to sit, to stand, to kneele.*
10. Habit; as, *to haue a cap on, to haue hose on, to haue a cloake on.*

The fourth Chapter.

Of Substance.

SVbstance is that which subsisteth of it selfe, and is the subject of all Accidents.

Singular Substances, are called, *Primary* Substances.

Universall Substances, are called *Secondary* Substances. Because that singular substances are first knowne. So children that haue no knowledge but by sense, wanting yet the vse of reason, know nothing but singular things. This knowledge is common vnto vs with brute beasts. But afterward reason gathering divers Singulars together, comprehendeth them vnder Vniversall things.

The Sunne, the World, the Moone, are primary and singular Substances; yet in regard that they haue a nature and essence, which might agree with many, if it so pleased God, they are also secondary substances.

All ſubſtances are either vncreated or created: the vncreated ſubſtance is God, all other are created.

Created ſubſtances are cloathed with accidents: but God hath no accident. For he is ſimple, and not compounded: his Attributes beeing his owne proper eſſence, which we diſtinguiſh in regard of their divers effects; but in truth they are but one and the ſelfe ſame thing.

Of created ſubſtances, ſome are Immateriall, as, Angels and Spirits; others are Materiall, namely, Such as haue bodies, whereof here is a more exact Diviſion.

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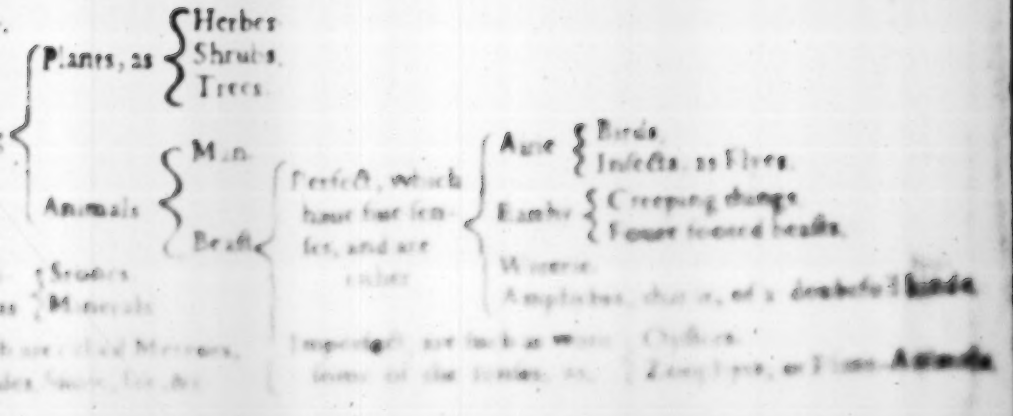
is called disjoyned Quantitie.

The other is compounded of continued parts, and therefore is called continued Quantitie. Quan-

The Table of S



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There can be nothing contrary to ſubſtance. Alſo, no ſubſtance is more ſubſtance then another, as, one horſe is not more a horſe then another, although it be a better horſe. True it is that God and the Deuill are ſubſtances, and that there is a contrarietie betweene them. As alſo fire is contrary to water; but this contrarietie is not in the ſubſtance, but in the will of the Divel's, and in the qualitie of fire and water.

The fift Chapter.

Of Quantitie.

QVantitie is that by which Subſtances are numbred, meaſured, or divided; and by which they are equall, or vnequall.

There be two ſorts of Quantitie.

The one is compounded of ſevered and disjoyned parts, and therfore is called disjoyned Quantitie.

The other is compounded of continued parts, and therefore is called continued Quantitie. Quan-

Quantitie disjoyned or ſevered is called Number, becauſe the parts haue betweene them no Continuitie. This Quantitie cannot be meaſured, but muſt be numbred.

Number is of two ſorts; either *numbring*, or *numbred*.

Numbers numbring are the numbers of Arithmetick, as, *one, three, five*, &c. Numbers numbred are the things that are numbred, as, *ſix men, ten horſes*, &c.

Sometimes the number numbred ſtands in ſtead of the number numbring, as, *Counters*.

Vnitie is no number, but the beginning of number.

The greateſt number of all cannot be found or imagined. For a man may ſtill adde to the greateſt number that can be given.

Continued Quantitie is that whoſe parts are joyned together with a continued ſequell, and which may be meaſured. This Quantitie is either, a Line, or a Superficies, or a Mathematicall bodie, or Time.

A Line is a length without breadth, as, *a myle, a meating wand.*

Superficies is a length with breadth, as, *the ſurface of the water,* or *of an acre of Land.*

Vnder the Superficies we comprehend alſo the Place, which is nothing els but the interiour Superficies of a bodie, containing another, as, the inward Superficies of a Hogs-head of Wine, is the place of the Wine.

A Mathematicall bodie is length, breadth, and depth; this bodie differs from a Phyſicall or naturall bodie, which is a materiall ſubſtance, and not a quantitie. Notwithſtanding every naturall bodie hath theſe three dimenſions, and cannot be without quantitie.

Time is the meaſure of the continuance of things. This meaſure is taken from the motion of the heavens, which maketh dayes and yeares.

Time hath two parts, namely, paſt, and to come: as for the preſent it is not time, but it is the inſtant or running-moment, which coupleth together

ther the time past, with the time to come.

The continuance of God is not called time, but Eternitie, which consisteth in two things. First to haue neither beginning nor ending. Secondly, not to passe away, nor to haue succession of parts. For the life of God consists in rest: because that if the life of God had a flux, or succession of parts, his life were partly past, and partly to come.

As Vnitie is neither number nor quantitie, so a Prick is neither quantitie, nor part of a line: as also a moment is no part of time, but the end or extremitie of time past.

Number is ancienter then continued quantitie, as it appeareth by the number of the Persons in the Trinitie, which is eternall and without beginning of time. But continued quantitie had a beginning with the creation of bodies.

Again, number may be counted by it selfe, and without any other helpe, but continued quantitie cannot be mea-

measured but by the helpe of the discontinued quantity. For every length or breadth is measured by the numbring of the feet, or inches, or meting-wands, or myles, or degrees.

Nothing is contrary vnto quantitie. For great and little are not contraries, but Relatiues or Respectiues; and one containes the other, which cannot be in contraries. The lesse number is contained vnder the greater, and is part of it: But heat is no part of colde.

The Table of Quantitie.

Quantitie is either
- Discontinued, which is called Number
 - Numbring
 - Numbred.
- Continued
 - A Line.
 - A Superficies.
 - A Bodie.
 - Time.

The sixt Chapter.

Of Qualitie.

QValitie is that whereby substances are qualified, and made like or vnlike one to another. For as things

are

are said to be the *same* things, when they haue one selfe same substance: and *equall* when they agree in quantitie: so they are said to be *alike*, when they agree in qualitie.

There are foure sorts of Qualities.

1. For they are either Actiue qualities, which be in the obiects of our outward or inward senses, and bring vnto vs some alteration or change in our bodies, or mindes, as, *sweetnes* in hony, *coldnes* in snow, *beautie* in a face, *hardnes* or *roughnes* in a stone, or in a bodie, which hurteth the sense of touching, *delight* in a Comedie. The effects which these qualities do work in vs are called Passion, whilest it is received. For when the smart of burning is over, the marke or blacknes that remaineth, is no longer called Passion.

2. Or els they be naturall qualities or faculties, as, *the vertue* of hearbs, *the faculties* of the soule, *heavines* in lead, *heat* in fire, and *coldnes* in water.

3. Or els they be habits, or qualities gotten by studie and exercise, as all

Arts

Arts are, whether mechanicall or liberall; and all *Sciences*. Which when a man hath attained vnto, and gotten a habit of them, he is thereby made the fitter for any action or exercise.

Bruit beasts that haue hearing, as, *dogs*, *horses*, *apes*, &c. are capable to get a habit, if feare doe not hinder them. For such creatures as are excessiuely timerous cannot be taught, as, *mice*, &c.

The instruments by which the habit is put into practice may be lost, and yet the habit remaine still, as, the *skill* of playing on the Lute, when the *hand* is cut off.

The preparation to a habit is called Dispolition, which is when a man hath not as yet gotten a habit, but is in the way to it, and hath besides his inclination some little knowledge.

Naturall faculties are great helpes to get and forme a habit. For he that by nature is vnfit to any Art or studie, can never attaine vnto a perfection, whatsoever paines he takes in it.

4. Or els they are Figures and outward

ward formes, as, *to be ſquare, round, ſharp, crooked, wrong, ſtraight.*

Qualities are contrary one to another, as, *heat*, and *coldnes*. And naturall powers are contrary to impotencie, as, *ſight* to *blindnes*, *hearing* to *deafenes*. Onely Figures & outward formes haue no contraries. For *roundnes* differeth from *ſquarenes*, but is not contrary vnto it.

To judge aright of any qualitie, it muſt be conſidered in the abſtract, and as not being tyed to any certaine ſubject: So *iuſtice* or *whitenes* are to be conſidered in themſelues, and not the juſt or the white. Becauſe the conſideration of the ſubject in the which juſtice or whitenes are inherent, doe but trouble & divert mans thought. Therfore if you will conſider a thing aright, you muſt conſider it apart and ſeparated.

One ſubſtance can haue but one quantitie, but it may haue a great number of divers qualities.

Qualities doe act, but quantities doe not, onely they doe helpe the action

action of the qualitie, as, the *greatnes* of a ſtone encreaſeth the *weight* of it.

A Spirit hath qualities, but no quantities.

The excellencie of qualitie aboue quantitie, conſiſts principally in that the quantitie proceeds from the matter, but the qualitie from the forme. Now the forme is ever more excellent then the matter. For by the forme things are made fit to act; but matter is that which makes them apt to ſuffer.

Forme and Figure act not, but they helpe and facilitate the action of him that acteth, as, the *roundnes* of a ſtone makes it to *rowle* the eaſier.

The Table of Qualitie.

Qualities are
1. Such as act against the ſenſes { Outward. Inward.
2. Natural power or impotencie.
3. Habits, whoſe beginning is called Diſpoſition.
4. Outward formes and figures.

The seventh Chapter.

Of Relation and Relatiues.

RElatiues are two things which haue a mutuall respect one to another, so as the one cannot be without the other, and the one is defined by the other, neither can the one be thought vpon without thinking vpon the other, as, *the Father* and *the Sonne*, *the Prince* and *the Subiects*, *the master* and *the seruant*, *the double* and *the halfe*, *the equall* and *the equall*.

The mutuall respect between these two things is called Relation. There be many Relatiues which haue the selfe same name, as, *friend* and *friend*, *like* and *like*, *equall* and *equall*.

The relation between two friends is called *friendship*; the relation between two things alike, is called *resemblance* or *likenesse*.

There be relatiues whose relation is imperfect, namely, when one of the two relatiues dependeth on the other, and

and cannot be without it, but the other may well be alone, and dependeth not on his relatiue, as, *the Paſtor* and *the flock*, *the Prince* and *the people*, *the ſight* and *the thing viſible*. For there may be people without a Prince, but no Prince without people.

There be alſo relatiues, which are not relatiues in their owne nature, but only in regard of vs, and becauſe we make them ſo to be by our conceiving of them: as, *the right* and *the left* between two walls, or two trees: but if we turne our ſelues, then that which was left, is right. For in a tree there is neither right nor left by nature.

If a Father haue many ſonnes, there are as many ſundry relations, as there be ſonnes; becauſe the Father is taken divers times as is the center of a Circle, which is taken as often as the lines are drawne from the ſaid center to the circumference.

One and the ſame thing may haue the name of two relatiues; as, *to be Father* and *Sonne*, *to be high* and *low*; but

in divers respects. For the same may be Father to one, and Sonne to another.

There be relations which spring from quantitie, as, the relation which is between *the double* and *the halfe*; Others that proceed from Qualitie, as, the relation between *two friends*. Others which come from Action, as, the relation between *the mother* and *the sonne*, *the Creator* and *the creature*. Others that spring from Situation, as, *the right* and *left*, *the high* and *lowe*, *the formost*, and *the hindermost*; between which Relatiues the relation hath no name.

We call that *formost* in living things, towards which the naturall motion is made; we call *right* that part which naturally is fittest for service. In a living creature we call that part *high*, by which the nourishment is drawne; as, in Plants, the root is the highest part, not in regard of the vniverse, but in regard of the Plant.

Such relations as are grounded vpon qualitie, admit of contrarietie, as, *friend-*

friendſhip, *likenes* : other relations admit of none.

In relations grounded vpon action, as betweene *that which heateth*, and *that which is heated*, there is no contrarietie. For *that which heateth*, and *that which cooleth* are contraries; but this contrarietie proceeds from the qualitie, namely, *heat*, which is the ground of this relation.

Friendſhip, as it is an affection moving the lover, is a qualitie; but as it is a mutuall reſpect betweene two friends, it is a Relation.

Although God, as he is Maſter and Creator, be a relatiue to his ſervants and creatures, there is not for all that any accident in God: becauſe the relation is not *in* the two relatiues, but *between* the two relatiues. And therefore it bringeth in no compoſition, nor to the ſubſtance any naturall change.

It is to be noted that two relatiues are commonly called the two termes of the relation.

The Table of Relatiues.

Relatiues are
- Either of their own nature
 - Perfect having
 - the same names.
 - diuers names.
 - Imperfect.
- Or onely in regard of vs.

All these relatiues are grounded vpon
- Quantitie.
- Qualitie.
- Action.
- Situation.

The eight Chapter.

Of Acting or Action.

TO Act is to moue it selfe against the patient, and to make it receiue the power of the Agent.

Of Actions some be naturall, as, *the panting of the heart, the motion of a stone downeward.* Others are voluntary, as, *to buy, to sell, to paint, to fence*; which notwithstanding are not done without the helpe of nature. Others are mixt, that is to say, partly naturall, partly voluntary: as, *to eate, to walke, to runne*; which indeed are naturall actions, but are guided by the will.

Violent actions and against nature, are such as are contrary to naturall actions,

actions, as, *the throwing of a ſtone vpward.* But thoſe are contrary to voluntary actions, which are called forced or conſtrained, as, *to be pulled or haled into priſon.* There be certaine actions that are partly voluntary, partly forced, as, *when a Merchant caſteth his merchandize into the Sea to eaſe the ſhip*; or *when a Patient cauſeth his arme to be cut off.*

The naturall actions and motions are ſwifteſt in the end; as, *the falling of a ſtone downeward.* The voluntary actions are ſwifteſt in the middeſt; as, *running.* The violent are ſwifteſt in the beginning; as, *the caſting of a ſtone*; or, *ſhooting of an arrow.*

Every action importeth a certaine motion. If the motion be in the ſubſtance, it is called Generation, or Corruption. If in the Quantitie, it is called Augmentation or Diminution. If in the Qualitie, it is called Alteration. If in the place, it is called Locall motion, or Tranſportation.

There is no generation without corruption, nor no corruption with-

out generation. But we call it generation, when the matter takes a better forme; and corruption, when it passeth into a worser.

The locall motion is the chiefest of all motions, without which the rest mooue not at all. And besides there is no other motion belonging to the heavens; where motion is the cause of all other motions, as well in Substance, as in Quantitie, and Qualitie.

The heavens in regard of the whole doe rest, but in regard of the parts, doe change place, even as a Top that sleepeth turning.

The Table of Actions.

Actions are { Naturall. / Voluntary. / Mixt. / Violent.

The Table of Motion.

Motion is on the { *Substance*, and is called { Generation. / Corruption. } / *Quantitie*, and is called { Augmentation. / Diminution. } / *Qualitie*, and is called *Alteration*. / *Place*, and is called Transporting or Local-motion. }

The

The ninth Chapter.

Of Suffering or Paſsion.

TO Suffer is to receiue the power of the Agent.

There are as many kinds of Suffering, as of doing.

Oftentimes the Agent doth ſuffer in acting, as, when a man rowling a weightie ſtone tireth himſelfe, and ſweateth: or when a man hurteth his teeth in cracking a Nut. The Agent doth not ſuffer, when it is out of the compaſſe of the Activitie of the Patient, as, the Sunne ſhining on the water, receiveth not the brightneſſe which the water ſend's back: becauſe it is out of the extent, which limiteth the reflection of the beames ſent back againe by the water.

God acteth alwayes, and every where, but never ſuffereth.

There are Verbs Actiues in Grammar, which are Paſſiues in Philoſophie, as, *to loue, to heare, to learne:* for all

all these are Passions, and are done by receiving. On the contrary, he which is loved or heard, is he that acteth & moueth the lover and the hearer.

There are some Passions perfecting, and others which are corrupting, as, *the inlightning in the aire, the receiving of learning in the vnderstanding*, or *of the images of things in the sight*, are Passions, which bring some perfection to the aire, to the vnderstanding, and to the sight.

The corrupting Passions are such as would destroy the Patient, if they did continue their encrease, or did increase aboue measure, as, *heating, cooling, wearisomnesse*.

The perfecting Passions are those which perfect a faculty or naturall power, and giue it that perfection for the which God did create it.

The tenth Chapter.

Of Where.

WHERE is not the place it selfe, but it is a designation, or

or a note of ſome certaine place. For place is a quantitie, and a ſpace that may be meaſured: But the *Where* cannot be meaſured. When a man putteth forth a queſtion touching the Place, the demand is, by *how much*, as for example, *how much place doth ſuch a bodie take vp?* But here the queſtion is by *where* or *whither*, as, *where is the King?* and, *whither goe you?*

Concerning Bodies the queſtion may be asked, how much place they take vp: but concerning Angels and ſoules, that queſtion cannot be asked, but onely this, where they are. This is it which the Philoſophers meane when they ſay, that Bodies are in a place *Circumſcriptiuely*, and Soules *definitiuely*; becauſe Soules are not limited or circumſcribed by place, and yet a man may ſay of them, that they are here, or there, and not els-where.

We cannot ſay that God is in a place any of theſe waies. For he is infinite, and ſo preſent in all places, as he is neither limited, nor defined by any place. It may be truely ſaid, GOD is here,

here; but it cannot be ſaid, GOD is here, and not there.

The eleventh Chapter.

Of When.

WHEN is not the time it ſelfe, but it is a deſignation, or a note of a certain time, as, *yeſterday, to day, to morrow*, &c.

When we ſpeake of time, and of the continuance of it, the queſtion is, by *how long?* as, *how long lived Noah? how long did the Romaine Empire continue?* But here wee aske by *When*, as, *When ſhall wee haue the Equinoxe? When was Iulius Cæſar ſlaine?*

Some things are done in time, which notwithſtanding are not meaſured by time; namely, ſuch as are done in a moment, as, *the impreſſion of a Seale; the inlightening of a chamber by the aire at the opening of the windowes; the receiving of the images of things in the eye.* Concerning theſe things, wee aske not in how long time, but when they were done.

The

The twelfth Chapter.

Of Situation.

SItuation is a Poſition or placing of parts in their whole, whether the ſituation be naturall; as, *the ſituation of the arme at the ſhoulders end*; or voluntary, as when we *ſit*, or *kneele*.

The thirteenth Chapter.

Of Habit.

BY Habit we doe not vnderſtand garments, for they belong to ſubſtance; but we meane the applying of garments and other ornaments about the bodie, as, *to be cloathed, to be ſhod, to haue a Caſſock or a Cloake on.*

Vnder theſe ten Claſſes or rankes of things, are contained all things in the world, and all ſimple Notions. And of theſe are framed Enuntiati-

ons

ons and Arguments or Syllogiſmes, whereof wee ſhall ſpeake hereafter. For there is nothing in the world out of which a man may not draw ſome Argument or Diſcourſe.

The

The ſecond Booke,

Which is

OF THE PLACES OF INVENTION.

The firſt Chapter.

How theſe ſimple Notions are of vſe for an Argument.

TO ſhew how theſe ſimple Notions enter into an Argument, or Syllogiſme, and how they are of vſe for Reaſoning & diſcourſe, they muſt be cloathed with other names. For if wee ſhould conſider them no otherwiſe then as they are handled in the Categories, they would never ſerue to open a diſcourſe, and to frame a reaſon. For as it

it is one thing to consider Leather or wood in themselues,& another thing to consider them as they are a fit matter to make a shoo or a bench: So it is another thing to consider things as they are in themselues, and another thing to consider them as they are meanes or instruments of reasoning. We haue considered in the Categories things as they are in themselues, now we are to consider them as they may serue to argue and discourse.

And therefore when a man will search out the truth of any question, (as for example, *Whether voluptuousnesse be a good thing*) and desires to gather proofes to proue or to impugne the question propounded; all that can be brought, is either,

1. The Genus of that which wee desire to proue.
2. Or the Species.
3. Or the Difference.
4. Or the Proper.
5. Or some Accident.
6. Or the Whole or some part of the Whole.

7. Or the Definition.
8. Or the Division.
9. Or some thing coupled vnto it.
10. Or the Cause or Effect.
11. Or the Etymologie.
12. Or something Like or Vnlike.
13. Or the Opposit.
14. Or a Comparison in the things.
15. Or a Comparison in the Probabilitie.
16. Or some Testimony.

Of all which heads we are now to treat of in particular, that wee may know what they are, and how to make vse of them.

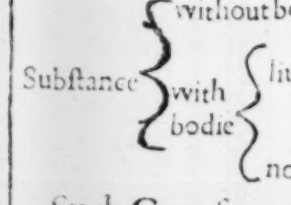
The second Chapter.

Of the Genus.

THe Genus is a nature which belongeth vnto many things differing in Species. As this word, *Animal*, is a Genus signifying a nature common both to *man* and *beast*: Animal is the Genus; man and beast are the

the Species. So *Plant* is the Genus of *Trees* and of *Herbes*; and *vertue* is a Genus whose Species are *Iustice*, *Temperance*, &c.

There is a Supreame and most Generall Genus; and an Inferiour and Subalternall Genus. As *Substance* is a supreame Genus, which can never be a Species: but *Animal* is an inferiour Genus. For though it be a Genus to man and beast, yet it is a Species to Bodie: as also Bodie is a Species to Substance. As in this Table;



Such Genuses are equally attributed to their Species, and vpon the same ground. But there are some Æquivocall Genuses, which are attributed to divers Species vpon divers grounds. As this word, *Wolfe*, is attributed to a terrestriall devouring creature, and to a Fish, and to a certaine disease.

A Genus Analogicall is that which is attributed to divers Species, though not altogether in regard of the same cause, yet for some respect or similitude. As this word, *Foot*, is attributed to the foot of *a living creature*, and to the foot of *a Table*, and of *a Horse*, and of *a mountaine*, and of *a drinking glasse*. So the word *healthfull* is attributed to *the bodie*, and to *the Aire*, and to *exercise*, and to *urine* in divers senses, and yet with some agreement too. Commonly such a Genus agreeth primarily to some one of the Species, and then secondarily to the rest, by reason of some relation which it hath with them, as may appeare by the forenamed examples. For the word *Foot*, first and properly is said of the foot of a liuing creature, and afterward of the foot of a mountaine or of a Table by a certaine resemblance or proportion. So likewise *to be healthfull* is said first of the body, and then of exercise, and of vrine, because they are helpes or markes of bodily health.

The Table of Genus.

Genus { Supreame / Inferiour { Vnivocall, as, *Animal, Plant.* / Æquivocall in { whole, as *Wolfe.* / part when }

there is some relation or agreement among the Species, As, *foot, healthfull.*

The third Chapter.

Of the Species.

SPecies is a nature comprehended vnder the Genus, which beeing joyned with a difference maketh a Species. So *man is a reasonable creature: creature* is the Genus of man, and the word *reasonable* is the differēce which distinguisheth man from other sorts of creatures.

There be two sorts of Species. The one most speciall, which can never be a Genus, as, *man, lyon, elephant, gold:* For such Specieses cannot be divided into other Specieses: but onely into singular Substances or Individuals.

The other is a Subalternall Species, which

which being compared with an inferior Species is a Genus. As, the word, *Animal*, is a Species in regard of a Bodie: but a Genus in regard of man.

From the Genus and Species are drawne Arguments for Discourse; and such arguments are grounded vpon these Maximes following.

Maximes.

1. *Whatsoever agreeth with the Genus, agreeth also with the Species.* For whatsoever may be said of *a tree* in generall, may be said also of *the Laurell*, &c. Excepting that which is attributed to the Genus, as it is a Genus. As to be more generall then the Species, and to containe them.

2. *That which agrees not with the Genus, agrees not with the Species.* For that which cannot be said of *animal*, cannot be said of *man*.

3. *It is not necessary that the Species be where soeuer the Genus is.* For if such a thing be *an animal*, it followeth not that it must therefore be *a man*.

4. But on the other side. *Where the Species is, there the Genus must needs be also.* For whosoever is *a man*, is also

an animal. And whosoever saith, that *this is a lettice*, doth by consequent affirme, that *it is an herb.*

The fourth Chapter.

Of Difference.

Difference is that, whereby one thing differeth from another.

Of differences some are greater then others. For there are things which differ onely in number; as *Peter* and *Iohn.* There be others which differ in the Species, as, *man* and *beast.* There be others also which differ in the Genus, as, *a man* and *a stone.* But the greatest difference is, when two things are in two divers Categories, as, *a horse* and *vnitum.*

There be also essentiall differences, and accidentall differences. As, a man differeth from a horse in essence, and definition. But a French man differs from a Moore onely in colour and complexion, which are accidents, and not things which make man to be man.

Among

Among the eſſentiall differences, the principall and moſt conſiderable is that, which is called Superficiall, by which the Speciefes of the ſame Genus differ eſſentially. This difference hath theſe two properties. That it conſtitutes the Speciefes; And divides the Genuſes. Thus the *life ſenſitive*, is the difference which conſtitutes *the animal*, and maketh the animal to be Animal. The ſelfe ſame difference divideth the Genus; namely, *Living*. So likewiſe *to be reaſonable*, is the difference which divideth *animal*, and conſtitutes man. And the ſame perfection which maketh man to be man, is that which maketh him differ from other Animals.

The fift Chapter.

Of Proper.

PRoper is of two ſorts. For there be ſome properties moſt-proper, and others leſſe-proper to a thing.

The properties moſt-proper, are

ſuch as are attributed to the ſingulars of the ſame Specieſes, and with them onely, and that alwayes. As, it is the propertie of the Loadſtone *to draw Iron*. And it is the propertie of man, *to be able to laugh*, and *ſpeake*: and of a horſe *to neigh*: and of an oxe *to bellow*.

The properties leſſe-proper, are ſuch as agree onely to the ſingulars of a Species, but neither alwaies, nor to all. As it is proper to a man *to be a Philoſopher*, or *a Muſician*: but neither to every man, nor at all times. So it is the propertie of the Moone *to be Eclipſed*, but not at all times. And the propertie of Plants *to looſe their leaues in Winter*; but that agrees not with all, nor alwayes: for there be ſome that are alwayes greene.

Maxime. *Whereſoeuer a difference is, there alſo is the Species, and the propertie moſt-proper.* For theſe ever goe all together.

The

The sixth Chapter.

Of the Accident.

BY Accident in this place, we doe not vnderstand whatsoever is in the world, Substance excepted. For Accident so taken at large comprehendeth also the Proper, and is of no vse to frame a Discourse or Argument.

But by Accident we vnderstand the mutable, or separable circumstances of a Subject, which may be, or not be in a Subject, without destroying the said Subject. As, *whitenes* in a wall, and *valour* in a man are accidents, which may be or may not be in a wall, or in a man, and that without destroying either man or wall, or causing them to be more or lesse man or wall.

Of these Accidents compared together, some goe before, and precede by order of nature the thing which wee intend to proue. Others doe accompanie the same. And others doe follow it.

it. The first are called Antecedents. As, *wearisomnesse, and shaking before an Ague; the foaming of the Sea before a tempest; the dawning of the day before the day*: The second are called Concomitants, that is to say, accompanying, because they goe together, As, *Pride and folly; The Eclipse of the Moone, and the full Moone*: The third are called Consequents. As, *raine, after a red morning; an ague after distast and wearisomnesse without former labour.*

Antecedents and Concomitants are vsed to proue probably that a thing is, or shall be. As, by *paleneſſe* we argue feare: and by *blushing* shamefastnesse, or the touch of conscience: and by *blunt hornes of the Moone*, we conclude that we shall haue raine: and by *the rednes of the same*, that wee shall haue winde.

But those proofes are most forcible that are drawne from subsequent accidents, which cannot be vnles some other thing hath gone before. As, we know there hath beene a battell *by*

many

many flame bodies lying in a field; and likewise *by many planks floating on the Sea.*

The Maximes are.

Maximes.

1. *The Antecedent being granted, the Consequent doth probably follow.*

2. *The Consequent being granted, the Antecedent must needs have gone before.* Especially when it is such an Effect as cannot be produced, but by one cause: As we proue, that because *it is day*, the Sunne is risen. But if it be an Effect, which may arise from divers Causes (As, *the corruptions of an Estate*; and *Agues*) the proofe is not necessary.

The seventh Chapter.

Of the Whole and Parts.

THe Whole is that which hath all the Parts joyned together in a conuenient order and situation. As, the whole and entire of *a house* is not onely when all the parts are there, but when every part is conueniently placed. There

There be two ſorts of Whole: the one which may be divided into formall parts; the other into materiall parts.

The Formall parts are thoſe whereof the Definition is compounded. As, the Genus and the Difference are the parts of a Definition. So *animal* and *reaſon* be the two formall parts of a man. So the formall parts of a houſe, or of an image of ſtone, are *their matter and their externall formes or figures.* Such parts may eaſily be diſcerned and diſtinguiſhed by our vnderſtanding, but cannot be really ſeparated.

The Materiall parts are thoſe which differ in Situation, and which for the moſt part may really be ſeparated. As the materiall parts of the world are *the heavens* and *the foure Elements:* the materiall parts of a houſe are *the foundation, the walles,* and *the roofe.*

Every materiall part hath a ſituation by it ſelfe, except there be a mingling or commixtion of the ſaid parts. As when *wine is mingled with water,* or when *the foure Elements are mingled*

gled in a Bodie. Materiall parts are either alike among themſelues (As, *the parts of water, Blond, Butter, Oile*:) or els are vnlike, as, *the parts of a mans bodie*, or *of a houſe*. The parts alike among themſelues haue no certaine number; becauſe they may be infinitely divided.

The parts vnlike are either Integrals, or not Integrals.

The Integrall parts are thoſe whereof the whole is immediately compounded. As, *a Kingdome* is immediately compounded *of a King* & the *three eſtates*. *The world* is compounded of *the heavens* and *the foure Elements*. *An animal* is compounded of *a bodie* and *a ſoule*.

But vnder one of theſe parts are oftentimes contained other little parts which are not Integrals: that is to ſay, whereof the Whole or the Entire is not immediately compounded. Among which there are ſome that are not neceſſary, ſerving rather for ornament and conveniencie, then for neceſſitie. As, in a Common-wealth, *hunters*,

hunters, perfumers, musicians, and *Poets.* In a house, *shuts to windowes, gutters,* and *weathercockes.*

Sometimes in a Common wealth the more necessary parts are such as appeare least, and are lesse in account then such as are for ornament or pleasure. As, *Bakers* are lesse in account then Cookes, and *Plommers* lesse then Goldsmiths.

There are little parts and not Integrall, which are notwithstanding principals, and altogether necessary. As, the *heart* and *braine* in man. A *vault* hath that propertie, that all the parts how little soever they be, are principals; because if one of them be taken away, the rest fall to the ground.

There are certaine parts which are not necessary for the being, and yet are necessary for the well and commodious being. As, *the eye* in a mans bodie, *lockes* in a house, *Merchant-drapers* in a towne.

The *Nayles* are part of mans bodie, as also the *teeth*: but *haire* is not. For it is an excrement.

A

A *small quantitie of our bloud* is not accounted a part of the bodie; because though it be taken away, the bodie remaines compleat, and oftentimes is the more healthfull. But the *whole masse of bloud* is part of the bodie.

Now to argue and seeke the truth by the helpe of the Whole and Parts, these Maximes are to be vnderstood.

Maximes.

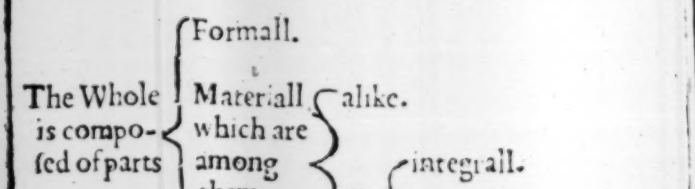
1. *Whersoever the Whole is, there also all the Integrall parts requisit to being, must necessarily be.* As, where *man* is, there necessarily is *the bodie* and *soule*.

2. *Take away any of the Integrall and necessarie parts, and you destroy the Whole.* As, take away the *foundation* or *walls*, and you destroy the *house*.

3. *Whatsoever is said of the Whole compounded of parts alike, may be said also of every severall part.* Except that which is said of *the Whole, as it is Whole*, namely, *to containe all the parts*. For example, to be salt is said of *the whole Sea*, and of *every part of it*: but *to encompasse the earth*, is attributed onely to the Sea, as it is *a Whole*: and therefore it is not attributed to any part of the Sea.

The

The Table of the Whole and Parts.



The eight Chapter.

Of Definition.

DEfinition is a speech which expresseth the essence of the thing. The perfect definition of a Substance is that, which is compounded of the next Genus and the specificall difference. As, the definition of *a Plant* is, to be *a bodie living a vegetatiue life*: *of man*, to be *a reasonable creature*. There are but few such Definitions; because the formes and essentiall differences of substances are not so well knowne vnto vs. God onely who made

made them, doth exactly know them.

The perfect definition of an Accident is compounded of three parts, namely, of the next Genus, of the proper Subject, and of the next Efficient or Finall cause. As for example, *death* is an accident, whereof the Genus is, *the end* or *destruction of life*, the Subject is, *a living bodie*, and the next Efficient cause is, *the extinguishing of vitall heat*.

This therefore is the perfect definition of *death*, namely, that it is *the destruction of the life of a living bodie by extinguishing the vitall heat*. Thus are defined anger, griefe, sicknes, thunder, earthquake, the Eclipse of the Moone, and that of the Sunne, Civil warre, respiration, and divers other things, whereof wee shall produce some examples in the end of this Chapter.

Now but Proper Accidents can be thus defined. For mutable and casuall Accidents, or such as haue no certaine knowne cause, or that depend vpon the will of man, cannot be ex-

actly defined. And therefore in ſtead of a Definition, we deſcribe them, as well as we may, expreſſing their Genus, and ſome certaine propertie. So *whitenes* is defined, when we ſay, that it is *a moſt ſimple and moſt cleare colour*. And *light* is defined to be *the chiefe of all whiteneſſes*; or, *the whitenes of the bodie of the Sunne ſending forth his likenes through tranſparent bodies.*

Naturall inſtruments, as, *the eye*, and *the hand*; or, artificiall, as, *a hammer*, or *ana xe*, are defined by their Genus, and by their fitnes for that vſe for which they are ordained. So *the Eye is the inſtrument of ſeeing*, and *a Hammer is an inſtrument to knocke withall.*

Definition ſerveth to diſcourſe and to argue by the meanes of this Maxime.

Maxime. *To whatſoever thing the definition agreeth, vnto that ſame alſo the thing defined doth agree.* And reciprocally, *to whatſoever the defined thing agreeth, to the ſame the definition agreeth alſo.*

The Table of Definition.

- Definition is either of a
 - Substance which is composed of the
 - Next Genus.
 - Difference.
 - Accident which is
 - Proper defined by the
 - Next Genus.
 - Proper subject.
 - Next cause
 - Efficient.
 - Finall.
 - Improper or casuall, defined as the Substance, so far as may be.

Certaine examples of the definition of a Proper Accident.

THunder is a sound in the cloud, by the breaking out of a flaming exhalation.

Death is the destruction of a living creature by extinguishing the vitall heat.

The Eclipse of the Moone is the darkning of the Moone by the interposition of the earth.

Anger is a perturbation of the mind arising from the opinion of a sustained wrong.

Civill warre is the trouble of an Estate arising from the discord of the parties.

Baldnes is the losse of the haire of the head through the want of radicall humour.

Respiration is the drawing in of aire into the lungs to refresh the heart.

Sicknes is an Indisposition of the bodie caused by the distemperature of the Humours.

The Earthquake is the stirring or moving of a part of the earth through the violence of winds therein enclosed.

Blindnes is a privation of light in the eye by the corruption of the instruments of seeing.

Sorrow is a griefe in the irascible facultie, through the griefe of some evill.

The Eclipse of the Sunne is the darkning of the aire by the interposition of the Moone.

The ninth Chapter.

Of Division.

THere are divers sorts of Divisions. For either we divide the Genus

nus into the Species, or the Whole into the Parts, or the Substance into divers Accidents, or an Accident into divers Subjects, or a Word into divers significations.

1. First we divide a Genus into the Species. As, *a liuing creature* into *man* and *beast*. *Actions* into *naturall* and *voluntarie*.

2. Or els we divide the Whole into Parts. So *man* is divided into *Soule* and *bodie*. *A house* into the *foundations*, *walls* and *roofe*. Which division is made either in thought or in deed.

3. Or els we divide the Subject into divers Accidents. As, when we divide *men* into *free* and *bond*, into *males* or *females*, into *fooles* or *wisemen*.

4. Or els we divide an Accident into other Accidents. As, when we divide *Physicians* into *rich* and *poore ones*: *souldiers* into *great* or *little ones*, strong or weake.

5. Or els we divide Accidents into divers Subjects, As, *sicknes*, into the sicknes of *the bodie*, and sicknes of *the soule*. So we may divide *corruption* in-

to the corruption of *ſimple bodies*, or into the corruption of *mixt or compounded bodies*.

6. Or we divide an Æquivocall word into divers ſignificatiõs, As the word, *linke*, which ſignifieth *a Sauſage*, *a Torch*, and *a linke of a chaine*.

Rules for Diviſion.

1. A good diviſion muſt haue but few parts, and thoſe oppoſit, if it may be. As, *animal* is divided into *reaſonable* and *vnreaſonable*; *Number* into *even* and *odd*; *A line* into *ſtraight* and *crooked*. But that is not alwayes poſſible. As when we divide the *externall ſenſes* into *fiue*. And *France* into *ſeventeene governements*.

2. In a Diviſion nothing muſt be either ſuperfluous, or wanting. As, if a man ſhould ſay, that *the ſenſes* are, *hearing*, *ſeeing*, *ſmelling*, and the *two eyes*; there were in ſuch a Diviſion ſomething wanting and ſomething ſuperfluous.

3. The parts of a Diviſion muſt not over-reach one another. As, who ſhould ſay that *all cloathing* of the bodie is either *garments*, or *habillements*, or

or *gownes*. Or that *Iuſtice* conſiſteth in three things, *to liue honeſtly, to hurt no bodie, to giue euery man his owne*. In theſe diuiſions the parts are but little or not at all differing, and are in a manner the ſame thing.

The Table of Diuiſion.

Diuiſion is of the
- Genus into the Species.
- Whole into the Parts.
- Subject into Accidents
- Accidents into divers Subjects.
- Æquivocall word into divers ſignifications.

The tenth Chapter.

Of things Coupled, called in Latin Conjugata.

COupling is conſidered either in Words or in Things.

Words coupled or conjoyned are ſuch, as come from the ſame beginning, and differ in termination, As, *iuſt, iuſtice, iuſtly: white, whiting, to white, whitenes*. The linke and affinitie of which words is grounded vp-

on some affinitie which is in the nature of the things signified by these words.

But there are certaine things coupled in Nature which are not coupled in Words. As *the sleepe*, and *to slumber*.

There are also certain words coupled, which notwithstanding for matter are not of necessitie linked together. As, *buckle* and *a buckler*.

Now for argument and discourse, the coupling and affinitie which is in words is of no vse, except there be also affinitie in the thing: but where the affinitie of words proceeds from the affinitie in the thing, we vse this Maxime.

Maxime. *To whomsoever one of the Coniugates or things coupled doth belong, the others also belong vnto the same.* As, *he that lyeth is a lyar.* And, *to whomsoever it belongeth to doe a iust thing, to him also belongeth iustice, and to liue iustly.* And, *seeing thou art a knaue, thou must be given vnto knavery.*

This Maxime is not without Exception.

ception. As, may appeare by the example of *Cambyſes*, who being very vnjuſt, did notwithſtanding ſome juſt actions. As in that he covered the ſeat of juſtice with the skinne of an vnjuſt Iudge, whom he cauſed to be flead, as a warning to all that ſhould ſit vpon the ſaid ſeat. And ſo there may be a Prince loving treaſon, who notwithſtanding hateth the traitour.

The eleventh Chapter.

Of Cauſes and Effects.

A Cauſe is that which bringeth forth an Effect: or that by which or for which any thing is.

There be foure kinds of Cauſes: the Materiall, the Formall, the Efficient, and the Finall. For example, *the matter* of a houſe is ſtones, wood, and tyles: *the forme* is the ſtructure and manner of building, which ariſeth from the placing or ordering of the parts: *the efficient cauſe* is the Maſter-builder: *the finall cauſe* is for dwelling or habitation. The

The efficient and finall cauſes are called *Externall*, becauſe they are out of the thing, and are not parts of it. As the builder is no part of the houſe: for ſuppoſe the builder were ſhut vp in the houſe, which he hath built, yet were he ſtill an externall cauſe, by reaſon that he is not of the eſſence or definition of the houſe, nor any part of it. But the matter and forme are *Internal* cauſes, becauſe the thing is compoſed of them.

The cauſe Materiall.

Matter is that whereof the thing is compoſed. As, *leather* is the matter of a ſhoe, becauſe a ſhoe is made of leather.

Matter is of two ſorts: the one is called matter of Generation, as, *the ſeed* is the matter of the Generation of a tree; *ſlime* is the matter of the Generation of frogs; ſo *water* is the matter of ice. The other is the matter of Compoſition. As, *the foure elements* are the matter wherof a bodie is compoſed; *wood and ſtone* are the matter of a houſe.

Sometimes matter is taken improperly

perly for the ſubject whereof we ſpeake or write. Thus *battails* and *loue* are the matter of the booke of *Arioſt*. And ſometimes for the occaſion and ſubject whereabout man doth labour and occupie himſelfe. As, *numbers* are the matter of an Arithmetician, and *dangers* and *troubles* are the matter of proweſſe and patience.

Forme is that which giueth being to a thing. Formall.

Of Formes ſome are Naturall. As the forme of an Animal is *the ſenſitiue ſoule*: and the forme of the eye is *the faculty of ſeeing*: Others are Artificiall. As the forme of a ſtatua, of a houſe, or of a clock.

Naturall formes are part of the ſubſtance, and are multiplied by generation. But Artificiall formes are qualities, and no parts of the ſubſtance, neither are they multiplied by generation or propagation. If we engraue the image of *Ceſar* vpon a nut, that nut being planted will bring forth fruit and nuts, but not the image of *Ceſar*. And thence it is that children

are

are not heires of the learning or piety of their fathers.

Efficient. The Efficient cause is that by which a thing is. As *the Sunne* is the efficient cause of the day: and *the fire* of burning: and *sicknes* of death: and *the interposition of the Moone*, the cause of the eclipse of the Sunne.

Vnder the Efficient cause we comprehend the cause which is called Meritorious. As *murther* is the cause of punishment.

Likewise vnder the Efficient cause we comprehend the cause which is called Defectiue. As *the want of sight* is the cause of going astray; and *the absence of the Sunne*, is the cause of night, howsoever by nature it be the cause of day.

All instruments, both naturall, as, *the eye* and *the hand*; and artificiall, as, *an Axe* and *a sword*, are in some sort Efficient causes. For though they act not by their own proper power, yet they helpe the action; and without them the naturall action would either be weake or altogether hindered.

The

Finall.

The Finall cauſe is that for the which a thing is done. So the end of Phyſick is *to heale the ſick*, and the end of Studie is *to get learning*.

We muſt warily diſtinguiſh *the ſcope* from *the end*. As, the ſcope of walking is *health*, but the end is the *laſt ſtep*; the one is the end of the intention; the other the end of progreſſion.

The finall cauſe may alſo be the formall and efficient cauſe, but in divers reſpects. As, the forme of the houſe is the end of the builder: and the forme of a horſe engendred is the efficient cauſe of the operations of the ſame horſe, and alſo the finall cauſe of the horſe engendring. And that which is the final cauſe, is commonly an effect. As *to ſee* is the finall cauſe, and alſo the effect of ſight.

Of cauſes the finall is the beſt, and moſt excellent: becauſe all the other tend vnto it, and ſerue it.

The finall cauſe as it is the laſt in execution, ſo it is the firſt in the intention.

Efficient and finall cauſes bring forth

Causes of themselues, or by accident.

forth their effects, either of themselues and of their owne nature; or by accident. Thus the Sunne *giueth light* of it selfe, and of his owne nature; but by accident *it blindeth Owles*. And *the neighing of Darius his horse* was the accidentall cause of his raise to the kingdome. And *thirst* may be an accidentall cause to saue a man out of the battaile; if being thirstie and gone out of the armie to drinke, it so happened that whilest he was a drinking, the armie was suddenly discomfited. So a Musician that buildeth a house, is not the cause of the building as he is a Musician, but as he is an architect or builder. It is the same of the finall cause. For example, *healing* is the proper end of Physick, but *the gaine* of the Physician is an accidentall end: the one is the end of the Art, and the other of the person.

Causes next or remote.

Againe, there be some next, and some remote causes. For example, the next end of the art of a souldier is *warre*, and the remote is *victory*, and the end more remote is *a happie peace*.

So

So the next efficient cauſe of death is *ſickneſs*, of ſickneſs *exceſſe*, and of exceſſe *bad company*.

The ſame may be ſaid of formes and matters. The next matter of a Table is *the wood*, but the remote matter are *the foure Elements*. The next forme of any thing is that which wee call *Specificall*; but the remote formes are thoſe of the next or of the remote *Genus*. So the next forme of a man is *to be reaſonable*, but *to haue ſenſe* is the forme of a liuing creature, which is the Genus of man, and by conſequent alſo is the forme of man, but remote.

Cauſes ſufficient, or not ſufficient.

Moreover, there be cauſes, which are Sufficient of themſelues to produce an effect. As, *the Sunne* is of it ſelfe ſufficient *to giue light*, and *fire to burne*, and *the favour of God to make a man happie*. But there are ſome cauſes, which are not of themſelues Sufficient, & muſt haue many together. As, *to make a fertile* ſoile, the ground muſt be luſtie, it muſt be well tilled, raine muſt moiſten it, and the Sunne muſt

must heat it in due season, and moderately. *To attaine vnto learning*, a man must haue a good wit, good instructions, and be diligent and painefull. So divers things are the causes *of victory*, experience in the Generall, valour in the Souldiers, military Discipline, necessary weapons, &c. but aboue all the will of God.

Now to argue from the causes and effects, these Maximes are of vse.

Maximes.

1. *That which agreeth with the matter, agreeth also probably with the thing composed of that matter.* As, the earth is heavie, and therefore terrestriall bodies are heavie. This Maxime is sometimes faultie. For example, Ice is hard, yet notwithstanding the matter of it is soft and liquid, namely, water.

2. *Where the matter is wanting, there also the thing composed is wanting.* As, where there is no iron, a sword cannot be made.

3. *The next efficient and necessary cause being granted, or denied, the effect also must be granted, or denied.* As, if the Sunne shine, it is day, if it shines not, it

it is not day. And this effect being granted, the efficient cause is also granted.

4. *When divers causes are necessarily requisit to produce an effect, one of the same causes being wanting, the effect also is wanting.*

5. *Such as is the efficient cause, such commonly are the effects.* As of wicked Fathers, come wicked Sonnes: and strong things beget strong things; and *Moores* haue blacke sonnes. This Maxime is often false, especially in remote and vniuersall causes. As the Sunne groweth not, and yet it causeth plants to grow, it hath no sent, and yet causeth flowres to smell sweet, and carions to stinke. And God mooveth all, but yet is immoovable. Also in causes which act by accident. As a Whetstone is not sharpe, yet causeth sharpenesse: the Sunne is not hot, yet warmeth by accident, in clearing and purifying the ayre by the reflection of his beames.

6. *If the selfe same qualitie be attributed vnto the agent and vnto the pati-*

ent, it muſt much more be attributed vnto the agent. As, the hand is warme by reaſon of the fire which acteth vpon it, therefore the fire is hotter then the hand. And the Sunne cauſeth the water to ſhine, therefore it is brighter then the water.

This Maxime is falſe in the fourth ſpecies of qualitie, namely, in the forme and figure; becauſe this qualitie receiues neither more nor leſſe. As, if the Seale be round, it followeth not that the figure printed in the waxe be leſſe round, then the Seale.

7. *The end being granted, thoſe meanes alſo without which the end cannot be attained vnto, are likewiſe granted.* As, if you grant that a man liveth, you grant alſo that he eats, drinkes, and breaths. And happineſſe being granted, vertue, and the favour of God are likewiſe granted.

8. *The meanes to attaine vnto the end being granted, it followeth not that the end muſt therefore alwayes be granted.* For it is no good reaſon to ſay, *Philip* hath bookes, therefore he is lear-

learned: he hath horſes and weapons, therefore he ſhall obtaine the victory. So alſo, *the end being taken away, the meanes are not alwayes therefore taken away.* For many, though they haue the meanes in their hands, never attaine vnto the end.

9. *Cauſes by chance or hazard are not fit to argue withall.*

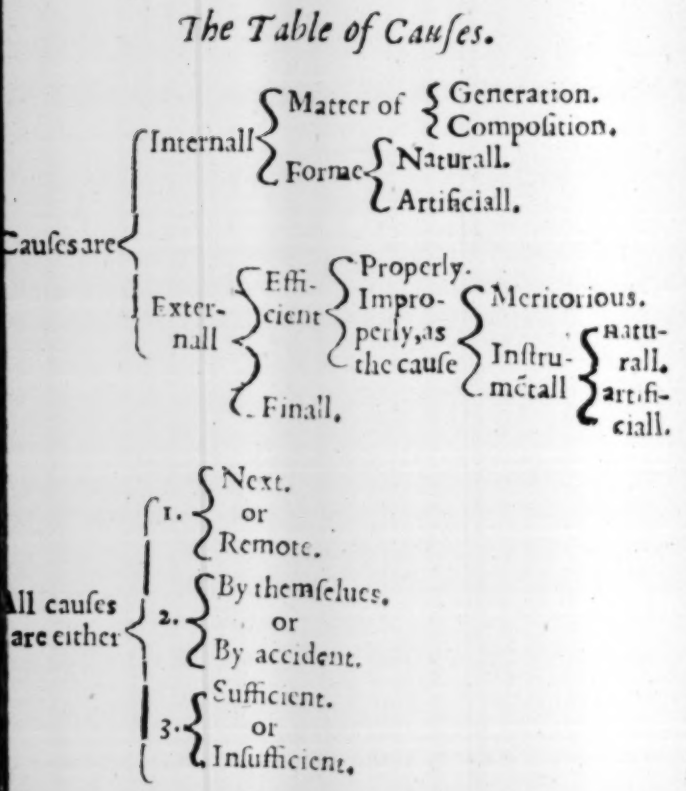
10. *If neceſſary effects be taken away, the cauſes alſo are taken away.* I ſay, *neceſſarie*; For there are ſome cauſes which act not neceſſarily, and which do not alwayes produce their effects. As, ſickneſſe brings not alwayes death.

11. *Cauſes are more excellent then their effects, vnleſſe the effect be a finall cauſe.* And therefore, to ſee, and heare, are things more excellent, then the faculties of ſeeing, and hearing; becauſe thoſe faculties are ordained onely for theſe effects, namely, to ſee, and to heare.

12. *The cauſes ever goe before their effects in the order of nature, but not alwayes in time.* Thus the Sun-beames

are as ancient as the Sunne; and the flame is never without clearenesse or brightnesse.

The Table of Causes.



The twelfth Chapter.

Of Etymologie.

ETymologie is the derivation of a word.

Etymologie in regard of the word, is as a Definition in regard of the thing; and serveth to argue and discourse. As when we say, *Such a one is not a Counsellour*, because *he gives no Counsell.* And *Philip cannot be called a Philosopher*, because *he loues not wisedome.*

Thus by the Etymologie of these names *Iesus* and *Christ*, wee gather what our Saviours calling and office is. And wee encourage such as haue a name importing some vertue, in stirring them vp to vertue by the Etymologie of their names. So *Eusebius* and *Pius* may be exhorted *to Pietie*, and *Andrew to valour*, and *Celestinus to giue himselfe to heavenly things*, least they belie their names by a contrary conversation. And so one ga-

thereth probably, that all things in times past were common, the *Robe* excepted, because when a theft is committed, we vse to say, Such a one hath beene *robbed*: and that the first Warres were against Beasts, because the Latin word *Bellum*, cōmeth from *Bellua*. But these kinde of proofes are very weake, because names are given vnto men, before it can be knowne whether they will be vertuous or no; nay, sometimes names are given by contraries, and by way of derision. As, when *a dwarfe* is called *a Goliah*.

Good Etymologies in the English tongue, are for the most part taken from the Latin; but such as are drawne from the English tongue are commonly absurd and ridiculous. For example, if a man should say, that *the woman is the woe of the man*; *and beere, quasi, be beere*.

The thirteenth Chapter.

Of things alike or vnlike.

THoſe things are called Alike which haue between them ſome Analogie and correſpondencie or proportion.

The analogie is knowne by the end and vſe. As *the Shepheard in regard of his flocke*, and *the Paſtor in regard of his Church*, are things Alike.

There be certain things differing, which the vulgar take for the ſame things, and none but Philoſophers doe diſtinguiſh them. As, loue and friendſhip; continencie and temperance; the flatterer and the man-pleaſer; memory and remembrance; chance and fortune; hate and envie; whoſe differences are learned by the Ethicks and Phyſicks.

Similitudes are rather ornaments of a ſpeech, then any proofes. As, when we ſay, Even as cracks in a veſſell are knowne when the veſſell is

filled with liquor: So the secret vices of the heart are discovered by plentie and prosperitie. And, that Hypocrites are like vnto Bees which haue hony in the mouth, and a sting in the tayle. And that covetous persons are like vnto Christmas-boxes, out of the which money cannot be gotten before they be broken. And false friends are like vnto Swallowes, that depart from vs in hard weather.

Metaphors well drawne are similitudes reduced to one word. As when we say, to feed the flocke, that is, to teach: and to staine ones reputation, that is to say, to backbite.

Similitudes haue two parts, the proposition and the reddition. The proposition, namely this, *euen as swallowes*, &c. The reddition as this; *So false friends*, &c.

Examples are taken from things done, and from humane actions: but Similitudes are oftentimes drawne from things fained, and from that which is obserued in nature.

Now to argue from the like, wee vse

vſe this probable Maxime. *To things alike agree things alike.* Maxime.

EXAMPLES OF ANALOGIE.

The Analogie between an Animal and a Plant.

In an Animal,	In a Plant.
The skinne	The barke or rinde.
The heart	The pith or marrowe.
The armes	The branches
The mouth	The roote.
The excrements	The leaues and gumme.
The veines	The graine of the wood.

The Analogie between mans bodie, and a Common-wealth, or Eſtate.

In Man,	In an Eſtate.
The head	The Prince.
The eye	The Councell
The armes	The ſouldiers and tradſmen.
The belly	The idle perſons.
The ſinewes	The money.
The joynts	Concord and good order.

The

The Analogie between a building and a mans bodie.

In a building,	In Mans bodie,
The kitchin	The belly.
The kitchin kniues	The teeth
The ſtudie	The braine.
The windowes	The eyes.
The fiue dores	The fiue inſtruments of the ſenſes.
The Maſter of the houſe	The ſoule.
The ſinke	The conduits of the excrements.

The Analogie between the indiſpoſitions of the Bodie and of the Soule.

In the Bodie,	In the Soule.
Blindnes	Ignorance.
Paine	Griefe
The dropſie	Covetouſneſſe.
The itch	Impatience.
Swelling	Pride.
A fit of an ague	Choler.
Shaking	Feare.
Contagious aire	Bad examples.
Painting	Hypocriſie.
Collicks	Troubles of conſcience.
Weakneſſe	Puſillanimitie.

The

The foureteenth Chapter.

Of things Oppoſit.

OPpoſites are ſuch as cannot ſtand together in the ſame ſubject, at the ſame time, and in the ſame regard. As a man cannot be at the ſelfe ſame time *both white* and *blacke* in the ſame part of his bodie, and not compared to other things: though he may be blacke and white, in divers parts of his bodie, either at divers times, or comparatiuely, white in reſpect of a Moore, and blacke in reſpect of a Swan.

There are foure ſorts of Oppoſits. 1. Relatiues. 2. Contraries. 3. Priuatiues. 4. Contradictories.

1. Of Relatiues wee haue alreadie ſpoken. lib. 1. cap. 7. Relatiues.

2. Contraries are two qualities or two actions which being vnder the ſelfe ſame Genus, are moſt remote one from the other, and are incompatible. As *blacke* and *white* haue the Contraries.

ſame

ſame Genus, namely, *colour*: *Vertue* and *vice* are ſpecieſes of *habits*, which being vnder the ſame Genus are of a contrarie nature.

Contraries are either Mediate or Immediate. Thus, there is a middle between black and white, namely, *pale* and *browne*: and between hot and cold there is *luke warme*. But between the number *even* and *odd*, between *the ſtraight* and *crooked line*, there is no third. The middle or meane doth vſually participate of the two contrary extreames: the meane between good and bad actions excepted. For the meane is that which is called an *Indifferent action*, participating neither of good nor evill.

Between two contrary vices, vertue is the meane. As between *coveteouſneſſe* and *prodigalitie*, there is *liberalitie, and good husbandrie*: between *raſhneſſe* and *cowardneſſe*, there is *valour*.

This mediocritie or meane participating of two extreames, is not in the vertue it ſelfe; for that hath no parti-

ci-

cipation with vice; but it is in those actions and things about which vertue is occupied. As, *to avoid danger*, and *to lay out money*. For these actions partly imitate the covetous man, and partly the liberall. And it fals out oftentimes that to each of the extreames there is a contrary vertue: as to prodigalitie, good husbandry; to *covetousnesse*, *liberalitie*: so *cowardnesse* and *rashnesse* are two extreames; and to *cowardnesse*, *valour* is contrary; and to *rashnesse*, *discretion*.

If two contraries happen to be vnder two next differing Genuses, (as, *iustice* vnder *vertue*, and *iniustice* vnder *vice*) these two Genuses must needs be contraries one to another, and Species of the same Genus. By this meanes all contraries, if they be not vnder the same next Genus, they are vnder the same remote Genus.

Words are sometimes wanting to expresse one of the contraries. Thus we haue no word to expresse the habit contrarie to *an ague*, nor to *a rheume*, nor to *the Physicks*, nor to *Grammar*.

3. Pri-

Privatiues.

3. Privatiue oppoſits are a qualitie, and the abſence and privation of that qualitie. As, *light* and *darkenes*; *ſight* and *blindneſſe*.

There can be no privation, when the ſubiect is not capable of the contrary qualitie. Thus in *a ſtone* there is no blindneſſe, becauſe it is not capable of ſight. And *a childe in the wombe* cannot be ſaid to be blind, nor *a whelp before it be nine daies old*, becauſe they are not come to that time wherin they ſhould ſee.

The privation of Actions may be remedied and recovered. As the privation of *the act of ſeeing* is recovered, when he that ſleepeth openeth his eyes to ſee. But the privation of the *Faculty of ſeeing* is irrecoverable.

Knowledge and *ignorance* ſimple and childiſh or brutiſh, are oppoſits privatiuely. But *wilfull ignorance* that armes it ſelfe with reaſons againſt the truth, is oppoſed vnto knowledge as a contrary, and not as a privation.

Contradictories.

4. Contradictories are ſuch betweene which there is no meane or mid-

middle. As, *to be*, and *not to be*; *man* and *no man*; *horſe* and *no horſe*. For there is nothing that is not either man or not man; horſe or not horſe.

Now when we will argue and proue any thing, Oppoſits are of great vſe. The Maximes are theſe.

Maximes.

1. *Whoſoeuer grants one of the relatiues, doth neceſſarily grant the other.* As he that calleth ſuch a one *a father*, affirmeth that he hath *a childe*.

2. *One and the ſame thing may be two relatiues*; As, to be *a father* and *ſonne*, *maſter* and *ſeruant*, *right* and *left*: but in divers reſpects.

3. *Contrary things haue a contrary conſequence.* As, vice makes a man wretched, therefore vertue maketh him happie. Here are excepted ſuch things as doe belong to the Genus of the two contraries. For if *blackneſſe* be viſible, it followeth not that *whiteneſſe* be inviſible; becauſe to be viſible, belongeth to the Genus of whiteneſſe and blackeneſſe, namely, to colour. We muſt alſo except ſuch cauſes as doe act by accident. As, if *a white*

white man buildeth his owne house; it followeth not, that *a black man* must pull downe his; and if *heat* doth harden the ground, it followeth not that *frost* must soften it.

4. *The selfe same cause may bring forth certaine effects, when the action of the cause dependeth from the disposition of the matter against which it acteth.* So the *Sunne* giues a sweet smell to flowers, but it makes a carrion stinke: and *fire* hardens the earth, and softens waxe.

5. *Every subiect that is capable to receiue the one of the contraries, is also capable to receiue the other.* Thus, whatsoever may be heated, may be cooled; and whatsoever may be hardned, may be softned.

6. *One of the contraries being granted, the other is overthrowne.* Thus, he that is not *free* is *a bondman.* But *it followeth not that if one of the contraries be denied, the other must be granted; except they be such contraries, as haue no meane between them.* As, if the bodie be not white, it followeth not that it is black.

But

But in contraries that are without meane, this consequent is good. As, if this line be not straight, it is crooked.

7. *Of two good things whereof the one is lesser and the other greater, the contrary to the greatest good is the greater evill.* As, vertue and health be two good things; if vertue therefore be a greater good then health, vice must be a greater evill then sicknesse.

Except when one of the two good things is comprised in the other. As, to haue the skill of reading, and the skill of Philosophie. For though the skill of Philosophy be a greater good, then the skill of reading, yet it followeth not, that not to be skilfull in Philosophie is a greater evill, then not to be skilfull in reading, because the skill of reading is comprehended vnder the skill of Philosophie.

8. *Contradictories cannot stand together, and one of them must of necessity be.* As, there is nothing that is not either man or not man; and it is impossible to be both the one and the other, at the same time.

The fifteenth Chapter.

Compariſon of things.

THings are oft compared according to their goodneſſe and excellency, and then the compariſon is made by theſe Rules or Maximes.

Maximes.

1. *Whatſoever is deſired in regard of it ſelfe, is better then that which is deſired only in regard of ſome other thing.* As, *life* is better then *money*, and *ſight* is more to be deſired then *ſpectacles*, and *health* then *Phyſick*.

2. *That which is good to all, is better then that which is onely good to ſome, and which is vſed but ſeldome, and for certaine reſpects.* Thus *light* is better then *darkneſſe*, and *to haue two armes* is better then *to be maimed*. For darkneſſe is of vſe onely for theeues, and debauched perſons; and to haue but one arme is of vſe onely to beggars, who thereby ſet forth their miſery.

3. *That which is good of it owne nature, is better then that which is good onely*

onely by accident, or which is of vse onely to avoyd a greater evill. Thus, *health* is better then *Physick*; and *to have our wares in our ship*, is better then *to cast them into the Sea*; and *prudence* is better then *chance.*

4. *One good which when we have, wee need not the other, is better then that, which when we have, we have yet need of the other.* Thus to be loved of *God*, is better then to be loved of *men*; and to haue the perfect knowledge of an Art, is better then to haue it written in a booke.

5. *Of finall causes, the last is ever the best.* Thus happinesse is better then vertue, and the skill of managing a horse, is better then the skill to make a spurre.

6. *Permanent goods are better then the transitory.* As, vertue is better then money.

But in generall without any respect to the goodnesse or excellency of things, they may be compared by these Maximes following.

1. *That which is such of it owne nature,* Other Maximes.

ture, is more such then that which is onely such by participation. Thus the Sunne is clearer then a looking glasse, when the Sunne shineth on it.

2. *That which is such of it selfe, is more such then that which is such onely by accident.* As, exercise and good nourishment is more healthfull, then the cutting off of an arme: and the death of the Sonne of God hath beene more beneficiall to salvation, then the treason of *Iudas*, howsoever God vsed it as a meanes for our good.

3. *That which is most remote from his contrary, is more such then that which is lesse remote.* And therefore the cold in *Norway* is greater then that in *Italy*, because it is more remote from the South, from whence the heat commeth.

4. *That which acteth more forcibly, is commonly more such, then that which acteth more weakely.* As, that which hurteth more is worse then that, which hurteth lesse, and that which pricketh more is sharper pointed, then that which pricketh lesse. This

rule

rule hath exceptions. Aire and water are equally moiſt, nay, *Ariſtotle* holds the aire to be moiſter; yet water moiſtens more then aire. So the flame is hot, or rather hotter then the hot iron, and yet a hot iron burneth more then the flame doth.

The ſixteenth Chapter.

Compariſon of Probabilitie or Likelihood.

THings are compared in probabilitie, when we queſtion whether of the two is the more credible. And this is done, when to proue ſome one thing, wee bring in another equally, or more, or leſſe probable, then that which is in queſtion.

This compariſon may bee made three manner of wayes. For

1. Probable alike.

Firſt when we will proue a thing in queſtion, we may bring in another thing as probable as it. For example, if a Prince hath granted ſomething to one Citizen, another Citizen may

pretend, that the like grant ought to be made vnto him also; because he is a Citizen as well as the other, and nothing inferiour to him. So a fault which is pardoned to some one in regard of his youth, must be pardoned to another as young as he. This reason is grounded vpon this Maxime.

Maxime. *Of two things equally probable, or equally iust, the one being granted, makes the other to be easily beleeved.*

2. More probable. Secondly, to proue a thing in question, wee may bring another thing more probable then it, arguing thus. If that which is more probable is not, much lesse shall that be, which is lesse probable. For example, if a Father will not haue his children goe richly apparelled, much lesse will he suffer it in his servants. And if the Apostles were not without sinne, how much lesse are wee; This is called arguing from a more probable to a lesse, and grounded vpon this Maxime.

Maxime. *If that which is more possible, and more probable be not; much lesse shall that be which is lesse probable and possible.*

The

The concluſion of ſuch arguments muſt alwayes be negatiue.

Laſtly, we may proue a thing in queſtion, by bringing in another thing that is leſſe probable, ſaying thus: If a thing leſſe probable, and harder to be beleeued, is notwithſtanding, or hath beene; much more ought we to beleeue, that which is more probable and eaſier to be done. So if one at twelue yeares of age can carry a waight of a hundred pound; by a ſtronger reaſon one may carry the ſame weight at the age of twentie yeares. And if *Alexander* tooke *Tyre*, much more eaſily might he haue taken *Ieruſalem*, which was weaker then *Tyre*, if he had beſieged it. This is called arguing from the leſſe probable to the greater, grounded vpon this Maxime. 3. Leſſe probable.

If that which is leſſe probable and leſſe poſſible may be, much more ſhall that be, which is more probable and more poſſible. The concluſion of ſuch arguments muſt alwaies be affirmatiue. Maxime.

Wee muſt warily diſtinguiſh be-

tween the greatnesse of the *thing*, and the greatnesse of the *probabilitie*. For greatest things are oft lesse probable, and more difficult. For it were no good argument to say thus. If birds can flie, how much more bulls. And if a threed can goe through the eie of a needle, how much more a cable. And if *Michael Angell* could paint very excellently, how much more the Emperour *Charles* the fift.

The seventeenth Chapter.

Of Testimony.

TEstimonies are often vsed to argue and proue a thing.

Testimonies are of force and doe perswade, when they be such as may not be denied, by reason of the qualitie, authoritie, sufficiencie, or multitude of persons.

Testimonies are either divine or humane.

Divine testimonies are Oracles, and all that is called the Word of God: likewise

likewiſe dreames, viſions, miracles, be they true or falſe, if they be delivered as true. Alſo rules to liue well, derived from nature.

Humane teſtimonies, if the queſtion be about matter of right, are humane lawes, cuſtomes, the teſtimonies of Anceſtours, or ſuch as are skilfull in their owne art, the conſent of nations. But if the queſtion be of fact, then are to be produced ſchedules, acquittances, confeſſions, eye or eare witneſſes.

Such witneſſes, as doe not affirme or denie a thing to be or not to be, are of no force. For there is a great difference between theſe two ſayings; *God ſaith not that ſuch a thing is*, and *God ſaith that ſuch a thing is not.* The latter is a good proofe, but the former hath no conſequence or ſequel. And likewiſe this proofe is of no effect: *Ariſtotle hath not ſaid ſo, therefore it is not ſo.* Or, *the Word of God ſaith not that man is a reaſonable creature*, and therefore *man is not a reaſonable creature.* Maxime.

Notwithſtanding, *if it be a thing which*

which cannot be knowne, but by the testimonie of one alone, then this kinde of arguing is good and forme. Such a one said not so, and therefore you cannot maintaine that it is so. For example, if we had no knowledge of *China* but by the report of one man onely; whosoever would affirme any thing without the warrant of such a one, without question would be prooved a lyar; or if he spake the truth it were but by chance, and not knowing himselfe whether he spake true or no. So likewise seeing that nothing that is necessary to salvation can be knowne without warrant from the Word of God; whosoever in things necessarie to salvation, affirmeth any thing not contained in the said word of GOD, ought not to be beleeved, & affirmes that which he knowes not.

The eighteenth Chapter.

Of the vse or Practice of the precedent Doctrine.

THis Doctrine contained in the sixteene precedent Chapters is called the doctrine of Places; because it shewes the places whence matter is drawne for argument and furniture for proofes. For example, if wee vndertake to proue, that, *Death is not to be feared of a vertuous man*, wee must runne over these sixteene places, and take notice of such as will best furnish vs with matter. To make this plaine we will runne over the said places, and apply them to this example.

The Genus of *Death.*

Death is the end of mans life. Now the end is to be desired, when it is not onely the end, but also the scope that wee must ayme at; such is death, vnto which a wise man ought to prepare himselfe every day, as being the end of his hope.

The

The difference.

This death comes by the ſeparation of the ſoule from the bodie, now wee muſt not feare the ſeparation of ſuch things, as being ioyned doe hurt one another: the ſoule conſumeth the bodie with cares, like vnto a knife that cuts its ſheath; the bodie is to the ſoule as a burden or a priſon; God ſeparateth them to reioyne them againe in a better eſtate and condition.

The Species.

There be two kindes of death; the one naturall cauſed through age, the other violent, which happens by ſickneſſe, or when a man is killed. Philoſophers ſay that death which comes through age is without paine, becauſe it is without combate or reſiſtance; and who would liue when all his ſtrength is ſpent? violent death is not alſo to be feared of a vertuous man, for what matter is it, whether I dye of an ague, or by the ſword? Whether by the diſtemper of humors, or by the diſtemper or commotion of people? Whether I yeeld vp my ſoule by the mouth

or

or by a wound, ſo it may goe to God.

The properties and accidents of Death.

Death makes all alike, both great and ſmall; It diſmasketh and diſcovereth thoughts; then diſſimulation hath no more place; The words of the dying are ſerious and of great weight, their prayers are fervent, their confeſſion humble, their admonitions to their children are received with attention, the ſpirit of God comforteth them within, the Angels guard and aſſiſt them without, and Ieſus Chriſt reacheth them out the crowne.

Of things conjoyned with Death.

If we muſt not bewaile the dead, why ſhould we then feare death?

The cauſes of Death.

The efficient cauſe of death is the will of God, which wee were better to yeeld vnto willingly then by compulſion; why ſhould

should we resist Gods will, seeing it is iust and vnevitable? Againe, the law of nature vnder the which we are borne is the cause of death: plead not therefore against your owne hand writing. Wouldst thou haue the lawes of the world changed for thee? The finall cause of death in regard of the world, is that we may giue place one to another; thy father hath given place to thee, giue thou place to thy children. The finall cause of death in regard of every vertuous man is to put an end to all his miseries, and to bring him home to God. For all these causes of death a vertuous man ought not to feare it.

Causes wherefore a thing ought not to be feared.

A thing is not to be feared: first if it is vnevitable; secondly, if it hurteth not; thirdly, if it be profitable. Death hath in it these three things. For it is vnevitable; therefore as it is a folly to hope for things impossible, so it is a folly to feare things vnevitable. Againe, death is not hurt-

hurtful because our Saviour Christ hath taken away the curse thereof. Lastly, it is profitable, and that is knowne by the effects which follow.

The Effects.

Death is profitable before death, for it abateth pride. Thou seest now a triumphing Monarch, and ere long toads will breed in his skull, and wormes in his entrails. The thought of death keepes a man in feare and sobriety, as also from sinning. Without it man would hardly be tamed. It makes vs despise the world, and to acknowledge the vanitie of all our toyle. It makes vs more earnest in prayer, and increaseth our faith through resistance. After death, it makes vs fully know that which we here see but afarre of, and very obscurely. It ioineth vs with the Saints and placeth vs with Christ Iesus. To feare death is to offer wrong vnto Christ, as if it were ill being with him. It maketh vs to see the face of God, which changeth them that see it into his owne likenesse. It bringeth vs into the possession of peace without

without end, of contentment without interruption, and felicitie without measure.

The Similitudes.

If new borne babes had the vse of reason, they would never crie, but rather much reioyce that they part from such an vncleane and obscure place, to enter into the light of this world: So, if we had the right vse of reason, wee would not be sad when death comes, because our soules goe out of an vncleane, straight, and obscure place, or rather prison, to enter into the light of heaven. Death is like Samsons *Lyon, whereof it is written, that from bitternesse came sweetnesse. Or like vnto the harsh sound of a boult at the opening of a doore, which notwithstanding is very pleasing, if it be to come out of a prison. Or as when Christ came to his Disciples walking on the waters, they said it was a spirit; but when they saw him neerer hand, they said of him, and so must we of death, it is the Lord that commeth vnto vs.*

The

The Oppoſits.

Preſent life is oppoſed vnto death, now if there be no cauſe to deſire life, no more is there to feare death. Vpon this occaſion you may run through every age of mans life, as alſo through the divers conditions that are from the Prince to the beggar, and ſhew that all is but miſerie. Beſides theſe evils and accidents which are common to all.

The Compariſon in regard of Goodneſſe.

Mutable and tranſitorie things are not ſo good as theſe that are eternall and permanent. Againe, the good which ſufficeth alone, is better then that good, which when we haue, wee haue yet need of another. He that hath happily ended his life, needeth neither money nor apparell, nor honour, nor health, &c. but he that hath nothing but the preſent life, hath need of all theſe things; and beſides them eternall good things.

The Comparison in regard of Probabilitie.

Probable alike.

If Martyrs feared not to dye in the flames of fire, why should we feare to dye in sickneſſe, ſeeing we haue the ſame hope?

Leſſe probable.

If the Heathen went to their deaths with as ioyfull a countenance, as others that returned ſafe from thence; why ſhould wee feare it that haue a better hope? Why ſhould ambition haue more force in them, then faith in vs? If a ſouldier doth adventure himſelfe vpon the mouth of the Cannon ſhot, and offereth himſelfe the firſt vpon a breach for the pay of ſix pence a day; what ſhould wee doe for an everlaſting kingdome.

Teſtimonies.

Here muſt be alledged the paſſages of the word of God, the ſentences of Philoſophers, the examples of ſuch as haue dyed conſtantly; As, of Regulus, *of the two* Decius, *of the* Gymnoſophiſts, *of the* Indian *Women, of the* Tribals, *of the Martyrs, &c.*

Finally,

Finally, by these sixteene places, as by certaine directions, we are furnished with abundance of matter for argument and discourse. And by these helpes we are put in remembrance of all that we haue read, heard, or seene, which may serue to amplifie the matter propounded. But the Maximes which are added to every place, are of vse to teach vs how the argument may bee well grounded, for they are as lights vnto our reason. And note also, that these places furnish vs with matter to argue, as well for *Death*, which is the Subject of this questiō, as for *Not to be feared*, which is the Attribute thereof, as wee shall see hereafter. But the Arguments which are drawne from the attribute are the strongest and most forcible.

ANOTHER EXAMPLE.

The praise of Sobrietie.

The Species of Sobrietie.

WE speake not heere of that Sobrietie which the Physicians appoint by dyet:

nor of that which is through neceſſitie, when we haue nothing to eat: nor of that cold gravitie of the Germans at the beginning of their meales: nor of that of couetous perſons, who grudge themſelues things neceſſarie: nor of that which is performed by a ſcrupulous abſtinence. But of that which is a morall vertue.

The Definition.

Sobrietie is a temperance, which preſcribeth a moderation in eating and drinking.

The Whole and the Parts.

Neither doe we ſpeake of that Sobrietie which conſiſteth in certaine meates, and not in other, in eating and not in drinking, in his owne houſe and not in companie. For ſobrietie giues lawes for all times, and all places, and for all ſorts of meates and drinkes.

The Etymologie.

ευφροσύνη *The Grecians haue rightly derived ſobrietie from a word which ſignifieth to keepe the vnderſtanding ſound; becauſe it preſerueth the health, and the libertie of the vnderſtanding.* The

The Genus.

I say it is a species of Temperance. Now Temperance is the nurse of all other vertues, the guardian of bodily health, and of the light of the minde, making it not to be subiect to the belly; it keepeth in brutall concupiscence, and teacheth how to eat to liue, and not to liue to eat.

The causes.

The cause why a thing is to be commended or desired is, if it be honest, delightfull, and profitable. Now sobriete hath all these three; for it is a good and comely thing to haue an vpright body in old age, to haue a fresh and lively countenance, not to be seene drunke nor croaking in an Alehouse among debauched persons &c.

It is a delightfull thing to be cheerfull and affable, and to haue peace at home; for drunkennes breedeth quarrels. Pleasures seldome vsed are sweetest.

It is a profitable thing to haue a strong body, a free minde, fit to goe about civill affaires, to haue a good memorie, not to waste goods, to provide for the necessitie of

the familie ; to husband the time well, not to reveale secrets : sobrietie is of vse for all these.

The Effects.

The causes for the which sobrietie is commendable, are also effects of sobrietie, and therefore we shall not need to repeat them.

The Opposits.

Here a drunkard must be set forth in all his colours, his speech, his gesture, his countenance, his troubled mind, the gout accompanying it, the red and bleer'd eyes, the memory overthrowne, the vnderstanding becometh more brutish, the leanesse proceeding from excesse is worse then that which commeth of want. Add vnto these the shame and reproach, when as the diseases of old age are imputed to the excesse of youth, by such as will be readie to say ; 'tis well bestowed, he hath not left his vices, but his vices haue left him. Againe, the good of the familie is wasted, time is mis-spent, the body and mind corrupted, quarrels are pickt in drinking, and lascivious desires are stirred vp, a man becomes a babler disclosing his most hid-

den

den ſecrets. It is a bottomles gulfe, for a little will content nature, but a greedie deſire hath no end. Intemperance either kindles or diſcovers all manner of vices.

The cauſes of drunkenneſſe and gluttony.

Bad company doth cauſe exceſſe: ſo doth the opinion of a falſe pleaſure. For what pleaſure is there to drinke without thirſt, and to ſtirre vp an artificial hunger when the belly is full. Alſo vaine glory cauſeth exceſſe, when men will imagine it to be a thing praiſe-worthy to be able to hold more drinke then another; and yet ſuch a man ſhall never hold ſo much drinke as a hogs-head; and though he haue a more capable bodie, he ſhall not therefore be accounted a man of greater capacitie.

Compariſon in the Probabilitie.

Seeing the very beaſts do not overdrinke themſelues, why ſhould a man by his drunkenneſſe make himſelfe worſe then a beaſt? Shall the inſtinct in a beaſt be of greater force, then reaſon in a man?

Similitudes.

A man cannot ſtudie neare a Kitchin; a drunkard is not fit for a Sentinell. God hath not made our bodies to be like Spunges, which are filled and then ſqueeſed out. Exceſſe in drinke kindles concupiſcence, as Oyle powred on a fire.

Teſtimonies.

Adde to theſe divine and humane teſtimonies. That God hath given man very long and evolved inteſtines, to the end that the meat being long in the paſſage, he ſhould not need to feed againe ſo ſoone. That God hath placed the braine farre from the belly, which is the Kitchin of the bodie. That the Lacedemonians would ſometimes make one of their ſlaues drunke, and paint him to their children, to make this vice odious vnto them.

All theſe things afford matter of argument: Of all theſe proofes ſome are more forcible then others. The force and ſoliditie of the proofes, is knowne by the helpe of the Maximes, which we haue added to every place.

¶ The third Booke.

Of Enuntiation.

The first Chapter.

What an Enuntiation is, and the parts thereof.

THE places or helpes of inuention contained in the fiueme precedent Chapters, afford vnto vs abundant matter for proofes and arguments. It now remaineth that we giue a forme vnto these proofes or arguments, and shew how to frame an argument, so as it may be of force to proue.

An argument or reasoning is by the Philosophers called *a Syllogisme*; which

which is a Greeke word ſignifying the making vp of an account, or the collecting of a ſumme. For that which is the making vp of an account, or the totall ſumme of Addition or Multiplication in Arithmetick, the ſame is the concluſion in a Syllogiſme, namely, that which reſulteth and followeth from the proofe.

Every Syllogiſme is compoſed of two Propoſitions or Enuntiations, and of a Concluſion.

Enuntiation is a ſpeech, wherein ſomething is affirmed or denied.

Every Enuntiation conſiſts of two words at the leaſt, which the Logicians call Termes: as, who would ſay, the two ends, or the two peeces. For example.

The fire burneth.
God is good.

Theſe Enuntiations are compounded of two parts, the one is called the Subject; the other, the Attribute. *Fire* is the Subject; and *burneth* is the Attribute; For burning is attributed to fire. *God* is the Subject; and this word *good* is the Attribute. This

This Verb, *Is*, is not reckoned as a part of the Enuntiation, but is onely the linke and bond of theſe two parts.

Whereſoever there is an affirmation or negation, there is an Enuntiation, though it ſeemeth to be but one word. As when we ſay in Latin, *Curro*, we vnderſtand, *ego curro, I runne.* And in Engliſh, *It raineth*, is an vſuall and common word, which is as much as this Enuntiation, *the raine falleth.* So when we ſay, *It freezeth, It ſnoweth*, &c.

And when wee aske any body, *Sleepe you ?* He that anſwereth *No*, maketh a kinde of ſecret Enuntiation; for it is as much as if he ſhould ſay, *I ſleepe not.*

When we argue, the Enuntiations muſt be full and perfect, ſo as there may be no need of any ſupplying.

All truth and falſhood is expreſſed by the Indicatiue mood; and therefore every Enuntiation muſt be couched in the Indicatiue; becauſe wee affirme or deny a thing onely by that mood.

mood. And therefore Imperatiues, Optatiues and Subiunctiues enter not into an Enuntiation, nor doe any seruice to the Art of Logick; whose end and scope is to search out and discerne the truth. Now truth is onely expressed by the Indicatiue. The other moods are left to Rhetorick, and serue onely for ornament.

Sometimes one of these termes or parts of the Enuntiation is expressed by many words; as,

All the lines drawne from the center to the circumference of the circle are equall.

God is free from all infirmities.

The Verb Substantiue is that which causeth the Subject to be distinguished from the Attribute; for it is placed between both.

An Enuntiation and a Proposition are the same thing; yet out of a Syllogisme wee call it Enuntiation, but in a Syllogisme wee call it Proposition.

The

The second Chapter.

Of the kinds of Enuntiation.

ENuntiations are either Simple or Compounded.

The Simple Enuntiatiõ, which also is called Categorical, when a thing is affirmed or denied simply & without condition, and without adding a *Whether*, or an *If*; as,

Man is reasonable.
Heaven is round.
Water is colde.
God is no lyar.

Of these Enuntiations some are Vniversall, and some particular.

Vniversall Enuntiations are such as haue these words, *All*, or *None*, joyned with them. As,

All men are sinners.
No man is perfect.

Particular Enuntiations are such as doe not affirme or denie generally of all, but onely of some in particular. As,

Some

Some man is blacke.
Some Kings haue not beene wise.
Every horse is not white.

Vnder particular Enuntiations, the Singulars are also comprehended: As,

Peter is foolish.
This man is a Philosopher.

Enuntiations which haue no note whereby they may be discerned to be vniversals or particulars, are called Indefinites, and in strict dealing must be taken for particulars. Notwithstanding, when the matter is Necessarie, they are of as much force as vniversals. As when I say, *Man is reasonable*, it is as much as if I should say, *All men are reasonable.*

But if the matter be contingent and and mutable: as,

Man is white,

they are but as particulars, and is no more then if I should say,

Some man is white.

Againe, Enuntiations are either Affirmatiue or Negatiue: Affirmatiue; as, *God is good.* Negatiue; as, *God is no lyar.* Thus

Thus we ſee there are foure kinde of Enuntiations. For they are either Vniverſall Affirmatiues. As, *All men are white.* Or Vniverſall Negatiues, as, *No man is white.* Or Particular Affirmatiues, as, *Some man is white.* Or Particular Negatiues, as, *Some man is not white.*

The vniverſalitie or particularitie of an Enuntiation is called the quantitie thereof. But to be Affirmatiue or Negatiue maketh the qualitie.

Simple Enuntiations are ſometimes modified by certaine circumferences of Neceſſitie, or Contingency, or Poſſibilitie, or Impoſſibilitie; as,

It is neceſſary that man be reaſonable.

It falleth out that it thunders in Winter.

It is poſſible that it raineth or hath rained.

It is impoſſible that the Soule ſhould be mortall.

An Enuntiation thus modified or qualified by ſuch circumſtances is Negatiue, when the negation is joyned to the modification or circumſtance.

ſtance. As when we ſay,

It is not neceſſarie that Cæſar overcome.

But this Enuntiation,

It is neceſſarie that Pompey overcome not, is affirmatiue.

Compounded Enuntiations are either Conditionall or Disjunctiue.

Conditionall Enuntiations are ſuch as neither affirme nor deny ſimply, but with an *If*; as,

If it be day, the Sunne is vp.
If God will, the troubles ſhall ceaſe.

Theſe Enuntiations are compounded of two parts; the former is called the Antecedent: and the latter the Conſequent. And both theſe may be affirmatiue; as,

If it be day, the Sunne is vp.

Sometimes the one is affirmatiue, and the other negatiue; as,

If the Sunne be not vp, it is night.
or, *If the Sunne be vp, it is not night.*

And ſometimes both negatiues; as,

If it be not a liuing creature, it is no man.

Disjoyned

Disjoyned or Disjunctiue Enuntiations are such as are compounded of oppoſed parts, whereof the one overthrowes the other; as, either,

It is day, or night.

This man is aliue, or dead.

Theſe Enuntiations are not true, except both parts be immediately contraries or oppoſits. For if I ſhould ſay,

This cloake is blacke, or white,

I might ſpeake againſt the truth; for the cloake may be gray or tawnie, &c.

The third Chapter.

Of the Oppoſition of Enuntiations.

OF Enuntiations ſome are neceſſary, and ſome probable or contingent. According to this difference Enuntiations are more or leſſe oppoſit one to another. Neceſſarie Enuntiations are either when the Genus is attributed to the Species; as, *Man is a liuing creature.* Or the difference;

as, *Man is reasonable.* Or the propertie; as, *All fire is hot.* The Contingents are when some accident is attributed to the Subject; as, *The horse is white. Man is a Physician.*

The Opposition of Enuntiations is done three manner of wayes. Either as Contraries, or Subcontraries, or Contradictories. In all which Oppositions one of the two opposed Enuntiations must ever be affirmatiue, and the other Negatiue, and the same termes must still be kept.

Contrary Enuntiations are an vniuersall affirmatiue, and an vniuersall negatiue; as,

All men are iust.
No man is iust.

Which are both false, because the matter is Contingent. But if the matter be Necessary, then the one is true, and the other false; as,

All men are liuing creatures.
No man is a liuing creature.

Subcontrarie Enuntiations are two particulars contained vnder two vniuersals, whereof the one affirmeth, and

and the other denieth; as,

Some man is iuſt,
Some man is not iuſt.

In a neceſſary matter the one is true, and the other falſe. But in a contingent matter they may both be true.

Contradictory Enuntiations are an vniverſall affirmatiue, and a particular negatiue. Or els an vniverſall negatiue, and a particular affirmatiue; as,

All men are white.
Some man is not white.

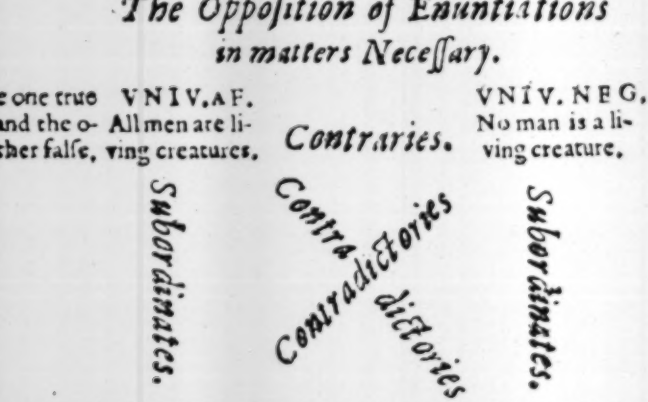
Or els.

No man is not white.
Some man is white.

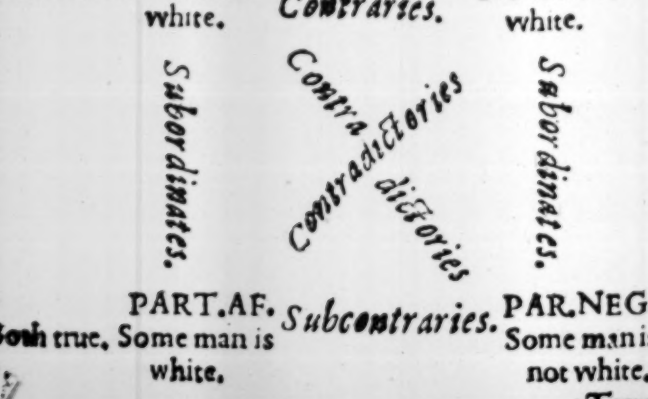
Of theſe two Enuntiations it is neceſſary that the one be true, and the other falſe, in what matter ſoever it be.

Contraries agree in quantitie, but are oppoſit in qualitie; as alſo Subcontraries: but Contradictories are both.

The Opposition of Enuntiations in matters Necessary.



The Opposition of Enuntiations in a matter Contingent.



Two

Two ſingular Enuntiations cannot be oppoſed one to another, but Contradictorily; as,

Peter is white. Peter is not white.

And therefore of neceſſitie the one muſt be true, and the other falſe.

The fourth Chapter.

Of the Converſion of Enuntiations.

TO Convert an Enuntiation, is to change it ſo as that the ſubject is turned into the attribute, and the attribute into the ſubject, keeping ſtill the truth. As, *No man is a horſe.* Then if you will convert this Enuntiation, you muſt ſay, *No horſe is a man.*

This Converſion is done either Simply, or by Accident.

The Simple Converſion is, when the Enuntiation is changed without altering the quantitie. Thus are vniverſall negatiues converted; as in the example before mentioned.

And ſo are particular affirmatiues.

As, *Some man is learned*, and, *Some learned is a man.*

But vniuerſall affirmatiues cannot be converted Simply. For in turning them ſo, their truth would be loſt. Thus it is true, that, *Every man is a liuing creature*: but it is not true, that, *Every liuing creature is a man.*

Therefore when wee goe about to convert ſuch Propoſitions, wee take away their vniuerſall quantitie, and in ſtead of ſaying *Every man is a liuing creature*, we turne it into a particular Enuntiation, & ſay, *Some liuing creature is a man.* Except when the ſubject is the ſpecies, & the attribute the property or differēce. For in this caſe the propoſition may bee converted ſimply. For example, *All liuing creatures haue ſenſe*; and, *All, that hath ſenſe is a liuing creature. All bodies haue three dimenſions: All that hath three dimenſions is a bodie.*

Particular negatiues are not converted: for example, this Enuntiation, *Some man is not a Philoſopher*, is true. But if you would turne it, it would

proue

proue false: *Some Philosopher is not a man.*

Vniversall affirmatiues may be conuerted into vniversall negatiues, composed of two negations. As,

All men are living creatures.

Whatsoeuer is not a living creature is no man.

A singular affirmatiue may be conuerted into a particular affirmatiue. As, *This horse is lame:*

Some lame thing is a horse.

The fourth Booke.

Of a Syllogisme, and the forme and kindes thereof.

The first Chapter.

What a Syllogiſme is. Alſo, what a Concluſion is, and a Queſtion, or Probleme, and the parts thereof.

A Syllogiſme is a reaſon or argument in the which from two Enuntiatiõs or propoſitions coupled together by certaine lawes, wee draw and deduce a neceſſary Concluſion. For example, if wee joyne theſe two Propoſitions together,

All

All that liveth hath a ſoule.
All plants liue.

This concluſion will follow,

Therefore *all plants haue a ſoule.*

As Propoſitions are called Enuntiations before they belong to a Syllogiſme; So the Concluſion before it be proued by a Syllogiſme, is not called a Concluſion, but a Queſtion or Probleme.

Now every queſtion or concluſion hath two parts, namely, the Subject, and the Attribute. As in the example aboue mentioned *Plant* is the Subject, and *to haue a ſoule*, is the Attribute. The Philoſophers call them the two Termes, whereof the ſubject is called the leſſer Terme, and the attribute the greater Terme: becauſe the attribute commonly is more generall then the ſubject. And that which in the Mathematicks is ſaid, *to containe*, in Logick is ſaid, *to be attributed.*

The

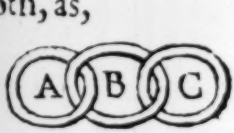
The second Chapter.

How to make a Syllogisme, and of the parts of it.

A Syllogisme is thus made. A question or probleme is propounded: for example, let the question be, *Whether Philip be a living creature or no?* Now he that will proue by a Syllogisme that *Philip* is a liuing creature, must dismember the said question into two parts; the one whereof is the subject, namely, *Philip*; and the other the attribute, namely, *liuing creature*. Then hee must looke out some third thing, which may be joyned and fitted to each of these two parts. For example, the word *Man*; which he must first joyne with *liuing creature*, and say, *Every man is a liuing creature*; and then he must joyne it with *Philip*, and say, *Philip is a man*; thence will follow this Conclusion, Therefore *Philip is a liuing creature*.

This

This word *man* is called the Meane or Link : because by the meanes thereof as by a Link, the two parts of the conclusion are coupled together. It is of this as of two Rings which are linked together by the meanes of a third, which is placed between both, as,



If the Ring A be joyned with the Ring B and the Ring B with the Ring C, it followeth that the Ring A is joyned with the Ring C.

This may also be illustrated by an example drawne from Numbers, reasoning thus. Twelue containeth six, and six containeth three, therefore twelue containeth three. For we said before, that that which is said *to containe* in Mathematicks, the same is said *to be attributed* in Logick.

Therefore every Syllogisme is compounded of three parts or Termes, namely, the Subject of the conclusion, the Attribute of the conclusion, and

and the Meane or middle Terme, which knitteth these two parts of the conclusion together.

It is no hard matter so soone as a Syllogisme is propounded, presently to perceiue which is the Middle terme. For it is all that which is not in the conclusion.

The Meane or middle terme joyned with the attribute of the conclusion, maketh that proposition which is called the Major or Greater: because the attribute of the conclusion which is called the greater terme is there. The same Meane being joyned with the subject, maketh the other proposition, which is called the Minor or Lesser; so called because the subject of the conclusion which is called the lesser terme is there. This Minor proposition is also called the Assumption. Now for more ease in this point, we will call the first proposition simply *the proposition*, and the second *the assumption*.

The

The third Chapter.

The naturall reason vpon which a Syllogisme is grounded.

THis structure of a Syllogisme is grounded vpon two naturall Maximes, acknowledged to be true by those of the Meanest capacitie. Whereof the first is. *Whatsoever containeth any thing, containeth also that which is contained in that thing.*

Which Maxime conceived in Logicall termes, is thus to be expressed. *Whatsoever is generally attributed to any thing, must also be attributed to such things, as the said thing is attributed vnto.* As, seeing that *to be a living creature* is attributed to *all men*, it must also be attributed *to Philip*, because *Philip* is a man. This first Maxime is the foundatiō of all Syllogismes that conclude affirmatiuely.

The second Maxime is, *That which agreeth not to a thing and cannot be attributed vnto it, agreeth not likewise to those*

those things which are contained under that said thing. As, *to be Almightie* belongeth not to *any creature*; therefore it belongeth not *to Angels*, because they are creatures. This Maxime is the ground of all Negatiue Syllogismes, that is to say, such as conclude negatiuely.

The fourth Chapter.

Of the Figures of a Syllogisme.

BEcause the Meane is diuersly joyned with the two termes of the conclusion: hence it comes to passe that according to the divers placing of the said Meane, sundry Figures and Formes of syllogismes doe arise. Now these Figures are three.

The first figure is that wherein the *meane* is the subject in the proposition, and the attribute in the assumption. As, in the examples before named; and also in this,

All MEN *are sinners.*
Paul is a MAN.
Therefore *Paul is a sinner.*

The

The ſecond figure is when the Meane is the attribute both in the propoſition and in the aſſumption. As,

All birds haue FEATHERS.
No Batt hath FEATHERS.
Therefore *no Batt is a bird.*

The third figure is when the Meane is the ſubject as well in the propoſition, as in the aſſumption. As,

The SOVLE *is immortall.*
The SOVLE *is a creature.*
Therefore *ſome creature is immortall.*

The fifth Chapter.

Generall Rules, common to all Figures.

ALL Syllogiſmes that are faultie in any of the Rules following conclude nothing.

The firſt Rule.

A Syllogiſme muſt haue three Termes, namely, the Subject, and Attribute of the concluſion, and the Meane; for where

where there be two Meanes the Syllogisme is starke naught. The reason drawne from nature is this: If two rings be linked with two other severall rings, it followeth not that therefore these two former rings be linked together. And likewise if you would know whether two peeces of ground agree in quantitie, you must not take two sundry measures; but only one and the same. Now the two Termes are like vnto these two peeces of ground, and the Meane is like vnto the said measure.

We vse to say there be foure termes, not onely when wee finde in a Syllogisme foure differing termes in words; but also when one and the same word is taken in a double sense, and is equivocall; as,

KING *is but one syllable.*

Alexander is a KING.

Therefore *Alexander is but one syllable.*

King in the proposition is taken for the word; in the assumption for the person. Likewise if I should say,

Every NVMBER *is an Accident.*
Ten men are a NVMBER.
Therefore *ten men are an Accident.*
I ſhould make foure termes, for in the propoſitiō the word *Number* is taken for the number numbring, and in the Aſſumption for the number numbred. Thus,

The END *is good.*
Death is the END.
Therefore *death is good.*

In the propoſition the word *End* is taken for the ſcope, & in the aſſumption for the extremitie of a thing.

The ſecond Rule.

Out of two negatiue propoſitions nothing can be concluded. As,

No man is a beaſt.
No horſe is a man.

Hence nothing is concluded. This may be known by the ſecond fundamentall reaſon or Maxime, ſet downe in the third Chapter. And the reaſon is manifeſt: For concluſions are then Negatiue, when the Meane agreeth with one of the termes of the concluſion,

sion, and not with the other: whence it is inferred, that the termes of the conclusion agree not together. And therfore the Meane must needs agree with one of the two termes; and this is expressed by affirmation.

Yet here is an exception, namely, when the proposition hath two negations equivalent to an affirmation. For example,

Whatsoever is not a living creature is not a man.

A Statua is not a living creature.

Therefore *a Statua is not a man.*

This Syllogisme is good, for the proposition having two negations, importeth as much as this affirmative: *Every man is a living creature.*

The third Rule.

If both the propositions be particulars, the Syllogisme is not good, and the forme of it is naught, and can conclude nothing.

This is likewise evident by the two fundamentall Maximes set downe in the third chapter, where these words, *Whatsoever containeth any thing*, pre-

ſuppoſe an vniverſall propoſition.

Nevertheleſſe, from two ſingular propoſitions a particular concluſion may be well drawne in the third figure. As,

NERO *was a Minſtrell.*
NERO *was an Emperour.*
Therefore *ſome Emperour was a Minſtrell.*

Againe.

IVDAS *is damned.*
IVDAS *was an Apoſtle.*
Therefore *ſome Apoſtle is damned.*

Or in the ſecond figure.

Therſites was DEFORMED.
This man is not DEFORMED.
Therefore *this man is not Therſites.*

Whence it is eaſie to ſee, that ſingular propoſitions are of more force in reaſoning then particulars.

The fourth rule.

The concluſion ever followeth the worſer and the weaker of the two propoſitions: That is to ſay, if one of the propoſitions be Negatiue, the concluſion alſo muſt be negatiue, and if one of the

the propoſitions be particular, the concluſion alſo muſt be particular.

Whence it followeth, that if the propoſitiō be an vniverſall negatiue, and the aſſumption a particular affirmatiue, the concluſion muſt be a particular negatiue. For affirmation is better then negation, & an vniverſall propoſition is better then a particular, becauſe it teacheth more things. The reaſon of this Maxime is evident. For a thing of leſſe worth cannot bring forth a thing more excellent, then it ſelfe.

The fift Rule.

There muſt not be more in the concluſion then there is in the propoſitions, As,

All that is ordained of God is good.
Marriage is ordained of God.
Therefore *marriage is good for an old man*; or, *with an Infidell.*

The ſixt Rule.

True propoſitions well coupled, cannot bring forth a falſe concluſion; but falſe propoſitions may by chance yeeld a true

concluſion. Which is done, when wee intend to proue a truth by a falſe reaſon; and a true concluſiō by a Meane which agreeth with neither of the two termes, or onely with the one. As, who would proue *Philip to be a living creature*, becauſe he is a horſe. Or that *a diamond is a ſtone*, becauſe it is a man. As,

All men are ſtones.
All diamonds are men.
Therefore *all diamods are ſtones.*

This concluſion is true, howſoever the two propoſitions be falſe.

The ſixth Chapter.

Speciall Rules for every Figure, and firſt for the firſt.

IN the firſt figure the propoſition muſt be vniverſall, and the aſſumption affirmatiue: or els the Syllegiſme is naught. For example,

Some bodie is a living creature.
Every ſtone is a bodie.
Therefore *ſome ſtone is a living creature.*

This

This concluſion is falſe, and followeth not from the propoſitiõs: becauſe the firſt propoſition is particular. And if I argue thus,

All men are living creatures,
No horſe is a man.
Therefore *no horſe is a living creature.*

This concluſion is falſe, and followeth not from the propoſitions; becauſe the aſſumption is negatiue. This rule is grounded vpon the ſecond Maxime ſet downe in the third Chapter which ſaith, that in Syllogiſmes concluding negatiuely, one of the propoſitions muſt be affirmatiue. Except when the negation doe make a part of the Meane. As if I ſay,

All that is not right is crooked.
This line is not right.
Therefore *this line is crooked.*

The evidence of this will appeare, if you frame the aſſumption thus,

This line is a line which is not right.

For then the aſſumption is turned into an affirmatiue.

The preeminences & prerogatiues

of the first figure are great aboue the two others. For the second figure cannot conclude affirmatiuely, and the third figure cannot conclude vniuersally, but in the first figure we may conclude all manner of wayes, and proue all manner of questions: whether vniuersall affirmatiues, or vniuersall negatiues, or particular affirmatiues, or particular negatiues.

Vniuersall affirmatiues. As we may proue that all couetous persons are theeues, because they withhold other mens goods.

Againe vniuersall negatiues. As we may proue that no couetous person is free, because he is a slaue to his money.

Wee may also proue in the first figure a particular affirmatiue conclusion. As we may proue that some fishes haue lungs, because they breath.

Lastly, we may proue in the first figure a question that is particular negatiue. As, that *Iudas*, and *Saul* are not saued, because they were impenitent.

More-

Moreover, the excellencie of the first figure appeares in this, that the others are reduced vnto it. For by changing something in them, they are reduced to the first figure; as wee shall see hereafter.

Rules for the second Figure.

In the second Figure the Meane is the attribute in both the propositions.

The first proposition in this figure must be universall, or els nothing can be concluded. As,

Some living creatures haue two feet.
No horse hath two feet.
Therefore *some horse is not a living creature.*

The conclusion is false, and followeth not; because the proposition is particular.

Againe, *in the second Figure one of the propositions must be negative, and consequently the conclusion.* For this reason were not good to say,

All hennes haue two feet.
You haue two feet.
Therefore *you are a hennе.*

The

The naturall reason hereof is apparant. For it followeth not, that if one thing be attributed to two other things, that these two things should be the same thing. As, if to be *yellow* belongs both to *hony* and to *gall*, it followeth not therefore *that hony is gall*: but it followeth well in the negatiue. As,

Hony is sweet.
Gall is not sweet.
Therefore *gall is not hony.*

The naturall reason hereof is, because if one thing belongeth to one of the two termes of the question, and not to the other, it followeth that the two termes agree not together.

How to reduce the Syllogismes of this second figure to the first.

In this figure when the proposition is negatiue, it is easie to convert and reduce the Syllogisme vnto the first figure. For then we must onely convert the proposition simply. As.

No terrestriall body mooues vpward.
Smoake mooues vpward.
Therefore *smoake is no terrestriall body.*

You may convert this proposition, say-

saying thus,

Nothing that mooues vpward is a terrestriall body.

And so you shall haue it in the first figure.

But if the assumption be negatiue, you must put it in the place of the proposition, and then conuert simply the conclusion, as also the assumption, which is become the proposition. As in this Syllogisme,

All men are liuing creatures.

No statua is a liuing creature.

Therefore *no statua is a man.*

You must change the assumption, and say,

No liuing creature is a statua.

And set it in the place of the proposition, thus,

No liuing creature is a statua.

All men are liuing creatures.

Whence the conclusion followeth well,

Therefore *no man is a statua.*

Which is the same conclusion, but onely conuerted simply.

Rules

Rules for the third Figure.

In the third figure the Meane is the ſubject in both propoſitions.

The aſſumption muſt be affirmatiue, as in the firſt figure.

The concluſion is alwayes particular, and cannot be vniverſall.

The naturall reaſon hereof is, becauſe if two things are attributed to the ſame thing, it followeth not that theſe two things agree alwaies together: but onely it followeth that they agree ſometimes and in certaine ſubjects. As, if to be *bright* and *round* belongs to the Sunne, it followeth not that whatſoever is round muſt bee bright. So *to be reaſonable* and *to haue two feet* belongs to man; whence it followeth not, that whatſoever hath two feet muſt be reaſonable: but onely that ſomething which hath two feet is reaſonable.

The Syllogiſmes of this figure are reduced to the firſt by converting the aſſumption. As,

All horſes neigh.
All horſes haue foure feet.

There-

Therefore *ſomething that hath foure feet neigheth.*

If you convert the aſſumption, ſaying,

Something that hath foure feet is a horſe,

This Syllogiſme will be in the firſt figure.

How to reduce the Syllogiſmes of the third figure to the firſt.

But if the propoſition be particular, as in this Syllogiſme,

Some Apoſtle is damned.

All Apoſtles are ſent of God.

Therefore *ſome one that is ſent of God is damned.*

Now to reduce this Syllogiſme to the firſt figure, you muſt convert the propoſition, and ſay,

Some damned perſon is an Apoſtle.

And then put it in the place of the aſſumption in this manner,

All Apoſtles are ſent of God.

Some damned perſon is an Apoſtle.

Therefore *ſome damned perſon is ſent of God.*

Which is the very ſame concluſion, but ſimply converted.

The

The seventh Chapter.

Certaine artificiall words which serue to shew how many wayes wee may argue in each figure, and how the second and third figure may be conuerted into the first.

TO helpe the memory *Logicians* haue found out certaine artificiall words, which serue to shew how many waies a man may argue in each figure. The words are these;

1. BARBARA, CELARENT, DARII, FERIO.
2. CESARE, CAMESTRES, FESTINO, BAROCO.
3. DARAPTI, FELAPTON, DISAMIS, DATISI, BOCARDO, FERISON.

To vnderstand the vse of these words, you must note that every one of these words hath but three Syllables: the first whereof signifies the proposition, the

the second the assumption, and the third the conclusion.

Againe, note that in all these words there are but foure Vowels, namely these,

A. E. I. O.

A signifieth an vniversall affirmatiue propolition.

E signifieth an vniversall negatiue propolition.

I signifieth a particular affirmatiue propolition.

O signifieth a particular negatiue propolition.

The Syllogismes which are made in the first figure are noted by these words, Barbara, Celarent, Darij, Ferio. 1.

The word BARBARA, ultimates, that whensoever the two propolitions in the first figure shall be A, that is, vniversall affirmatiue, the conclusion shall likewise be A, that is, an vniversall affirmatiue.

So the word CELARENT signifieth that whensoever the propolition in the first figure shall be E, that is, an vniversall negatiue, and the assumpti-

ſumption A, that is, an vniverſall affirmatiue; the concluſion ſhall be E, that is, an vniverſall negatiue. So likewiſe of all the other words.

2. The Syllogiſmes of the ſecond figure are noted by theſe words, Ceſare, Cameſtres, Feſtino, Baroco,

The word FESTINO intimates, that whenſoever the propoſition in the ſecond figure ſhall be E, that is, an vniverſall negatiue, & the aſſumption I, that is, a particular affirmatiue; the concluſiō ſhall be O, that is, a particular negatiue. As,

FES—*No compounded thing is eternall.*

TI—*Some thing in man is eternall.*

NO—Therfore *ſomething in man is not compounded.*

Note that in theſe foure words, the laſt ſyllables are alwayes either E or O, to ſhew that the concluſion muſt alwayes be negatiue.

3. The Syllogiſmes of the third figure are noted by theſe words, Darapti, Felapton, Diſamis, Datiſi, Bocardo, Ferriſon, and haue the ſame vſe. For

For example, the word F E L A P-T O N ſignifieth that if the propoſition in the third figure be E, that is, an vniverſall negatiue, and the aſſumption A, that is, an vniverſall affirmatiue; the concluſion muſt be O, that is, a particular negatiue. As,

F E —— *No Batt hath feathers.*

L A P —— *All Batts flie.*

T O N —— Therefore *ſomething that flies hath no feathers.*

Note that in all theſe ſix words, the laſt ſyllables haue either I or O, to ſhew that the concluſion in the third figure muſt alwayes be particular.

The Conſonants of theſe ſame words are not without their ſpeciall vſe. For they ſerue to know how the Syllogiſmes of the ſecond and third figure may be reduced to the firſt. To this end ſerveth the firſt capitall letter. For Ceſare and Cameſtres are reduced to Celarent: Darapti, Diſamis, Datiſi are reduced to Darij: Feſtino, Felapton, Feriſon are reduced to Ferio.

Baroco and Bocardo cannot be re-

duced, becauſe one of the propoſitions is a particular negatiue, which cannot enter into the firſt figure.

S ſignifieth that the propoſition which is noted with an S, muſt be ſimply converted. As in Ceſare and Datiſi.

P ſignifieth that the propoſition muſt be converted by Accident, that is to ſay, that the vniverſall affirmatiue muſt be converted into a particular affirmatiue. As in Darapti and Felapton.

M ſignifieth that the propoſitions muſt be tranſpoſed, and muſt change their place. As in Cameſtres and Diſamis, whereof we haue given examples.

The eight Chapter.

Of an Enthymeme.

AN Enthymeme is nothing els but a Syllogiſme, whereof one of the propoſitions is ſuppreſſed, either for brevities ſake, or for ſome deceipt.

ceipt. For brevitie, as

God ſinneth not.

Therefore *God is no lyar.*

Or

Nothing that corrupteth man can be the chiefe good.

Therfore *Voluptuouſneſſe is not the chiefe good.*

For deceipt, as,

This Common-wealth is the greateſt.

Therefore *it is the beſt.*

Or

Whatſoever troubleth a Common-wealth muſt be baniſhed.

Therefore *the Goſpell muſt be baniſhed.*

In theſe imperfect Syllogiſmes, that propoſition is ſuppreſſed which is moſt odious, and wherein the falſehood lieth, namely, *Every Common-wealth, that is, the greateſt is the beſt.* As alſo this, *The Goſpell troubleth a Common-wealth.*

Somtimes to make the ſpeech more ſmooth and currant, we put the concluſion in the firſt place. As,

The eſtate of Oligarchy is the worſt of all.

Becauſe it is moſt ſubiect to ciuill warre.

Rhetoricians call Enthymemes proofes grounded vpon probable ſignes. As,

Milo killed Claudius:
For he hated him before.

Or

This man is learned:
For he is pale and hath many books.

Theſe proofes are of no force, except they be in great number. For ſignes and conjectures which haue no force being alone, become forcible when there are many of them together.

The ninth Chapter.

Of Induction, and of Example.

INduction is a Syllogiſme wherein divers ſingulars or particulars are as a Meane to proue an vniverſall concluſion. As when I will proue that *all liuing creatures haue feeling*; becauſe *birds, fiſhes, ſerpents, terreſtri-*

all

all beasts, and Amphibia haue feeling.

Or thus, *the Stag, the Doe, the Hare, the Coney, the Mouse haue a great heart in proportion to their bodie: Now the fearfull creatures are the Stag, the Doe,* &c. Therefore *all fearfull creatures haue a great heart in proportion to their bodies.*

By this kinde of discourse all Sciences haue beene invented. For example, Physicians having by the tryall of many plants of Mercurie or of Parietarie obserued, that they are laxatiue, haue thence gathered a generall rule, that all plants of Mercurie or Parietarie are laxatiue. Thus haue men attained to the knowledge of the causes of Eclipses, of Apoplexies, and of Flouds greater then ordinarie about the Æquinoxes by sundry particular obseruations.

Of Example.

An Example is an imperfect Induction. For in stead of many particulars we vse but one.

In naturall causes Examples are more forcible then in ciuill and voluntary actions: becausse naturall e-

vents are much more alike then civill and voluntary actions, which are ſubiect to many changes and chaunces. As if I ſhould ſay, *Yeſterday in the evening the skie being red, the day following proved faire*: this example hath ſome likelihood to proue, that ſeeing the skie is red this evening, to morrow it will proue a faire day. But if I ſay, *Philip digging his garden found a pot of gold*, it followeth not that *Alexander* digging ſhall haue the ſame hap.

Orators notwithſtanding do much enlarge themſelues vpon ſuch examples. And by reaſon of the miſchiefs which haue hapned to any one through drunkennеſſe, or lying, or anger, they vſe to exhort others to ſhunne the ſame vices.

The tenth Chapter.

Of the Enumeration of parts.

THe Enumeration of parts is alſo a kinde of Syllogiſme, ſerving to con-

conclude both affirmatiuely and negatiuely.

When we will conclude affirmatiuely, we make a rehearsall of all the parts: that so having remooved all the parts but one, that one which remaineth may be concluded or affirmed. As,

What goods soever a man hath, he hath them either by inheritance, or by purchase, or by exchange, or by gift, or by labour, or by play, or because he hath found them, or stollen them. But the goods which you haue, you haue them neither by inheritance, nor by purchase, nor by exchange, nor by gift, nor by labour, nor by play, nor because you haue found them. Therefore *you haue stole them.*

But when we will conclude negatiuely, we remoue all the parts. As, *All Frenchmen are either Normans, or Picards, or Champenois,* &c. *But the Lorrains are neither Normans, nor Picards, nor Champenois,* &c. Therefore *they are no Frenchmen.*

You must ever take heed that the Enumeration be not imperfect; as, when

when we say that *all mankinde is either male or female:* Or that *every action is either good or bad.* For there are Hermaphrodites; and there be some actions that are indifferent. So if I should say that *every qualitie is either a naturall facultie, or a habit, or an actiue qualitie in the obiects of the senses, this enumeration would proue imperfect.* For besides these there are *formes and figures.*

The eleventh Chapter.

Of a Dilemma.

A Dilemma is a forked or horned argument, wherein we giue our aduersary his choise of two things, to shew him that whether of the two soeuer he chooseth, he is still ouercome in both. As, to proue that a man should never marry, wee may argue thus, *If thou marriest, thy wife will be either faire or deformed; If faire thou wilt proue iealous; If deformed thou wilt not like her.* Therefore *it is better not*

to

to marry. Or, *be not a lawyer, for if thou pleadeſt for iuſtice, thou ſhalt diſpleaſe God; If thou pleadeſt for iuſtice, thou ſhalt diſpleaſe men.* Our Saviour Chriſt made a Dilemma when he was buffeted, ſaying, *If I haue ill ſpoken ſhew wherein; but if well, why ſmiteſt thou me?* Thus a man may reaſon againſt one that hath dreamed that we muſt not beleeue dreames: Or that hath ſworne that he will forſweare himſelfe. *If thou forſweare thy ſelfe, thou art a periur'd perſon; If thou doeſt not forſweare thy ſelfe, yet art thou ſtill a periur'd perſon; becauſe thou haſt ſworne that thou wilt forſweare thy ſelfe.*

Carneades gaue twentie crownes to his Maſter *Diogenes* to teach him Logick. One day diſputing with his Maſter according to the rules that he had taught him, his Maſter told him that he diſputed not well; Wherevpon his Scholar made him this Dilemma. *I diſpute either well or ill: If I diſpute well, why blameſt thou me? If I diſpute ill, giue mee backe my twentie crownes?* Such was the diſputation betweene

Pro-

Gellius. l.5.c.10.

Protagoras and his Scholar *Evathlus*, which example is well knowne, and the recitall would be too too long. You may see it in *A. Gellius. lib. 5. cap. 10.*

The twelfth Chapter.

Of a Sorites, or heaping Syllogisme.

A Sorites is a kinde of argument which knitteth many propositions together, to shew that the subject of the first agreeth with the attribute of the last. As,

Whatsoever acteth, moveth.
Whatsoever moveth, is mutable.
Whatsoever is mutable, is corruptible.
Whatsoever is corruptible, is not God.
Therefore *it is inferred, if God acteth, he is not God.*

So many propositions, so many Syllogismes which haue *God* for the subiect of the conclusion.

The

The thirteenth Chapter.

Of Conditionall or Hypotheticall Syllogiſmes.

VVE haue ſaid that Enuntiations are either ſimple or compound; and that of compounded Enuntiations, ſome are Conditionall or Hypotheticall, and ſome Disjunctiue.

Hitherto we haue treated of Syllogiſmes conſiſting of ſimple propoſitions, now we are to ſpeake of Conditionall and Disjunctiue Syllogiſmes, whoſe propoſitions are conditionall or disjunctiue.

A Conditionall Syllogiſme is, whoſe propoſition hath an *If*. As,

If there be a God, he muſt be ſerved.
But there is a God.
Therefore *he muſt be ſerved.*

The propoſition hath two parts, the firſt whereof is called the Antecedent, *If there be a God*: the ſecond is called the Conſequent, *He muſt be ſerved.*

There

There are two Rules for these Syllogismes.

I. Maxime. The first is, that *if the Antecedent be granted, the Consequent is also granted.* As,

If Paul be a man, he is a living creature.

But he is a man.

Therefore *he is a living creature.*

But you cannot by over throwing the Antecedent, overthrow the Consequent. As,

If a flie be a bird, it is a living creature.

But a flie is no bird.

Therefore *it is no living creature.*

II. Maxime The second Maxime is, that *if the consequent be overthrowne, the antecedent is overthrowne also.* As,

If a statua be a man, it is a living creature.

But a statua is no living creature.

Therefore *it is no man.*

If the antecedent be the species, and the consequent be the difference or propertie, then you may overthrow the antecedent to overthrow the con-

se-

ſequent. As,

If a ſtatua be a horſe, it neigheth.
But it is no horſe.
Therefore *it neigheth not.*

But ſuch concluſions follow by chance, and not by the force of the Syllogiſme.

In theſe Syllogiſmes the aſſumption is part of the propoſition, which propoſition maketh an entire Syllogiſme. And it is probable that this word *Aſſumption* is borrowed from theſe Syllogiſmes, becauſe that in them the ſecond propoſition is taken and aſſumed out of the firſt.

The foureteenth Chapter.

Of Diſiunctiue Syllogiſmes.

DIſjunctiue Syllogiſmes are ſuch, whoſe propoſition is compounded of two disjunctiue parts or peeces, or which are ſeparated by this particle OR. As, *It is day or night. This number is even or odd.* As thus,

This

This man is dead or alive.
But he is dead.
Therefore *he is not alive.*
Or els thus,
But he is alive.
Therefore *he is not dead.*
Or thus,
But he is not alive.
Therefore *he is dead.*

For those propositiõs are compounded of such parts, the one whereof cannot be granted, without overthrowing the other; Nor can you overthrow the one without establishing or graunting the other. And for this cause, these two parts must be immediately opposit, so as there may be no third. For example, this argument is not good.

There is peace or warre.
But there is no warre.
Therefore *there is peace.*
For there may be a truce.

In these Syllogismes to the end that the truth may be evident and without exception, the two parts of the proposition must not be contradicto-

rie, but muſt be either contraries, or privatiues, or relatiues. For example, if I argue thus,

This line is ſtraight, or crooked.
But it is ſtraight.
Therefore *it is not crooked.*

This argument is cleere and certaine.

But if I argue thus,

Philip is wiſe or vnwiſe.
But he is vnwiſe.

From thence wee can draw no concluſion that may haue any likelihood of reaſon.

The

¶ The fift Booke.

OF THE MASTER-PEECE OF LOGICK *called* DEMONSRATION.

The first Chapter.

What Science is.

THis word *Science* is sometimes taken for the whole bodie of one kind of learning. Thus Ethicks, Phyſicks, Metaphyſicks, civill Law, are called Sciences. Sometimes the word *Science* ſignifieth onely the knowledge of a

concluſion prooved by Demonſtration. And this is it whereof we purpoſe to treat of in this place; which is thus defined.

Science is a certaine knowledge of a thing certaine, whoſe prooſe is drawne from the cauſe.

To haue the Science of a thing, two certainties are required. The one is, that the thing be certaine of it ſelfe and vnchangeable. The ſecond is, that the perſwaſion which wee haue of it be firme and cleare. If either of theſe two certainties be wanting it is no Science, but opinion. For a man may haue a doubtfull opinion of a thing certaine. As he that doubteth whether there be a God.

And on the contrary, a man may haue a firme and ſtedfaſt perſwaſion of that which is vncertaine and falſe. As thoſe that ſuffer death for the defence of a falſe Religion.

And therefore it is not amiſſe to know the difference between *Science*, *Faith*, and *Opinion*. Science is a certaine knowledge of a certaine thing by

by the next cauſe. Opinion is a doubtfull or falſe knowledge. Faith is a firme perſwaſion grounded vpon the Teſtimonie of ſome other.

If a man know certainly a thing becauſe he ſeeth it, or toucheth it, that is neither called Science, nor Faith, nor opinion; but *ſenſe*, which knoweth onely things ſingular: but Science is of things vniverſall.

The ſecond Chapter.

What a Demonſtration or Demonſtratiue Syllogiſme is.

A Demonſtratiue Syllogiſme is that which giveth or bringeth certaine knowledge of the concluſion. If we will define it more exactly, we muſt define it thus. A demonſtratiue Syllogiſme is that which prooveth that the attribute of the concluſion is truely attributed vnto the ſubject, by a Meane that muſt be the next efficient or finall cauſe of the attribute of the ſaid concluſion.

These two sorts of causes were called *externall*, in the Chapter of Causes aboue mentioned: because they are no parts of the effect, nor of the thing compounded, though sometimes the efficient cause be in the very same subject. As, the soule of man is the cause of the sense in man: and the thicknesse of gold is the cause of the weight of it. In these examples the efficient cause and the effect are in the same subject.

The third Chapter.

What questions are demonstrable.

SVch questions wherein the attribute is a substance, cannot bee prooved by demonstration: because substances haue no certaine efficient cause proper vnto them. For the will of God is an vniversall cause common to all things, and by consequent it can be no Meane in a demonstratiue Syllogisme.

Againe,

Againe, such questions or conclusions wherein the attribute is a mutable or casuall accident, cannot be proved by demonstration: because these accidents haue no certaine and assured cause. As, *Philip is rich. Bucephalus halteth.*

But those questions are demonstrable, whose attribute is a proper and immutable accident, whereof the next efficient or finall cause may be given. For example, these questions may be prooved by demonstration.

A transparent bodie is without colour.
Eunuches are never bald.
Fixt Starres doe twinckle.
The Moone suffers obscuritie.
Of all estates Oligarchie is the most subiect to civill warre.
Lines paralell never meet.
All bodies compounded of Elements are corruptible.
Under the scorching Zone it is very hot.

For the next efficient or finall cause of

of the attribute of theſe queſtiõs may be given.

The fourth Chapter.

What the propoſitions of a demonſtratiue Syllogiſme ought to be.

THe Demonſtration muſt conſiſt of neceſſary propoſitions; among which thoſe are the moſt neceſſarie, which are called Immediate.

There be two ſorts of immediate propoſitions, that is to ſay, ſuch as are without any middle. For ſome are immediate in regard of the ſubject, and others are immediate in regard of the cauſe.

Immediate propoſitions in regard of the ſubject are when the attribute agreeth next of all and immediately to the ſubject, ſo as a neerer ſubject cannot be given. In ſuch propoſitions the attribute agreeth with the ſubject, becauſe it is ſuch a ſubject. For example, if I ſay that *a horſe hath ſenſe,*

ſenſe, this attribute agrees not next and immediately to a horſe; for there is a neerer ſubject, namely, an Animal, vnto the which ſenſe belongeth. But if I ſay that *a horſe neigheth*, this agreeth next and immediately to a horſe, as he is a horſe, and not by reaſon of any other neerer ſubject.

Immediate propoſitions in regard of the cauſe are, when an attribute is ſo neerely joyned to the ſubject, as that the cauſe or reaſon cannot bee yeelded why it ſhould be ſo. For example, here is a Demonſtration:

Whatſoever hath a ſenſitiue ſoule hath touching.

Every animal hath a ſenſitiue ſoule.

Therefore *every animal hath touching.*

In this Syllogiſme the concluſion is immediate in regard of the ſubject, but not in regard of the cauſe. For in this Syllogiſme the Meane is the cauſe of the concluſion. But the two propoſitions are immediate, both in regard of the cauſe, as alſo of the ſub-

ject; for nothing can be alledged as a cause of their truths.

Sometimes the efficient and finall causes are linked together with a long chaine. As,

Under the Æquator the aire is very hot, because it is very subtill; The aire is very subtill, because the Sunne doth rarefie it very much; The Sunne rarefies the aire, because the beames fall in right angles; The beames fall in right angles, because the Sunne is there in the Zenith.

Thus it is in the finall cause.

The Lungs draw in the aire to refresh the heat of the heart: The heat of the heart is refreshed to keepe the Temperature: The Temperature is kept to preserue life.

So many causes, so many demonstrations. But the last where also the chiefest and last cause stands for the Meane, is the noblest of all: because it can no further be demonstrated: and the two propositions are immediate every manner of way.

The

The fifth Chapter.

A ſpeciall note to know a perfect Demonſtration.

OF all the markes of a perfect Demonſtration, this is the moſt evident, when it may be converted or reduced to a definition. For we haue ſaid heretofore that the definition of a proper accident is compounded of three parts; namely, of the Genus of that which is defined, and of the proper ſubject, and of the cauſe thereof. As the definition of Death is, the deſtruction of the life of the creature by the extinguiſhing of vitall heat. Out of this definition a demonſtration may be framed, making the Subject of this accident to be the ſubject of the concluſion, the Genus to be the attribute, and the cauſe the Meane. As thus, *L.2. c.8.*

Whenſoever the vitall heat is extinguiſhed, life is deſtroyed.

But

But in a living creature the vitall heat is extinguished.

Therefore *in a living creature life is destroyed.*

The same may be said of these definitions following. *Sleepe is the heavinesse of a living creature, by the cessation of the common sense. Thunder is a noyse in the clouds, by the breaking out of the fire.*

The sixth Chapter.

Of an Imperfect Demonstration.

WEE haue shewed that a perfect demonstration is that, which proveth by the next efficient or finall cause of the attribute; that the attribute of the conclusion agrees with the subject.

If any of these perfections be wanting, the demonstration is the weaker, and lesse perfect.

If the Meane be not the next cause of the attribute, but onely a remote cause, then is the demonstration weaker,

ker, and more imperfect. And such demonstrations for the most part conclude negatiuely. For example.

Where there is no opposition of contrary qualities, there is no death.
But in the heavens there is no opposition of contrary qualities.
Therefore *in heaven there is no death.*

Or

He that is of a cold temperature will never be bald.
But Eunuches are of a cold temperature,
Therefore *Eunuches will never be bald.*

In these demonstrations the propositions are not immediate: For the Meane is not the next cause of the attribute. To haue no contrary qualities is not the next cause of not dying, but a remote cause: for the next cause of not dying in mans body is the continual preservation of the humors in an equall temperature; and the cause hereof is to haue no contrarietie

rietie or combate betweene the elementarie qualities in the bodie.

Thus the cauſe why Eunuches become not bald is, become the radicall humor of the haires is not ſpent; and the remote cauſe is, becauſe they haue but little heat.

In theſe demonſtrations the propoſitions are not immediate, for the Meane is not the next cauſe of the attribute.

And though the propoſitions be immediate, yet if the Meane be not the cauſe, but the effect of the attribute, then it ſhall be a leſſe perfect demonſtration; proving not the effect by the cauſe, but the cauſe by the effect. This kinde of demonſtration ſhewes not why the concluſion is, but onely that it is. As,

All that loue God are beloved of God.
But all that haue faith in Chriſt, loue God.
Therefore *all that haue faith in Chriſt are beloved of God.*

The Meane is *to loue God*, which is not the cauſe, but the effect of the

loue

loue which God beareth vnto vs; which *loue* is the attribute of the conclusion in this demonstration, wherein the cause is proved by the effect: whereas in a perfect demonstration we proue effects by their causes. Therefore this imperfect demonstration proveth onely that the thing is, but sheweth not why it is. The effect may very well be the cause of knowing, but not of being. As the smoake which we see come out of a chimney may be a cause to make vs know that there is fire in the house: but it is not the cause of the fire, but onely the effect. And the vnequall beating of the pulse is not the cause of the Ague, but it is a cause which makes vs know that such a one hath an Ague.

(∴)

The

¶ The sixt Booke.

OF SOPHISMES OR FALLACIES.

The first Chapter.

Of Fallacies in words.

ALL *Fallacies* or *Sophismes* committed in disputing are either in the Words, or in the Matter.

Fallacies in words are of six kindes. 1. Æquivocation. 2. Amphibologie. 3. Deceipt by Composition. 4. Deceipt by Division. 5. Deceipt in the Accent or Pronuntiation. 6. And deceipt in the Figure of the word.

1. *Of*

1. *Of Æquivocation.*

Decipt by Æquivocation is, when the Meane is a doubtfull word, taken in the propoſition one way, and in the aſſumption another way. As,

That which hath neither beginning nor ending, God created not.

The roundneſſe of the Heavens hath neither beginning nor ending.

Therfore *the roundneſſe of the Heavens God created not.*

In the propoſition beginning and ending is taken for continuance of time: but in the aſſumption it is taken for the beginning and ending of a figure. Or thus,

He that ſaith that thou liveſt, ſaith true.

He that ſaith that thou art a gooſe, ſaith that thou liveſt.

Therefore *he that ſaith that thou art a gooſe. ſaith true.*

In the propoſition it is meant of an expreſſe ſaying; but in the aſſumption of a ſaying by conſequence.

Thus a man of great capacitie may be

be taken for a learned man, and ſometimes for one whoſe ſtomacke is able to containe much wine.

The ſame fallacie may be committed alſo when a word is otherwiſe taken in the propoſitions, then in the concluſion.

2. *Of Amphibologie.*

Amphibologie is an ambiguous conſtructiō, making the ſenſe doubtfull. As,

Faith alone iuſtifieth.

It cannot be knowne whether the meaning be, that faith being alone iuſtifieth; or els that faith iuſtifieth onely. In the firſt ſenſe it is falſe; for faith alone without good works is no true faith, and by conſequent iuſtifieth not. But in the ſecond ſenſe it is true that faith onely iuſtifieth, becauſe it onely hath the propertie to iuſtifie. So it is true in one ſenſe, that the eye alone ſeeth, but it is falſe in another ſenſe that the eye ſeeth alone. For an eye that is out of the head ſeeth not

3. *The fallacie in Compoſition.*

The fallacie in Compoſition is, when things are taken as conjoyned, which cannot be true, but in a divided ſenſe. As in this propoſition:

A man that is ſet may runne.

Which is true if it be meant at divers times; but if it be meant at the ſame time it is falſe and impoſſible. For a man that is ſet cannot runne whileſt he is ſitting. So, *that men are male and female*, is true of divers perſons; but falſe if it be meant of the ſame perſons.

4. *Of the fallacie by Diviſion.*

This fallacie of Diviſion is contrary to the former. For this ſeparateth things which cannot be true, except they be joyned together. Thus, though it be true that two and three make fiue, yet it followeth not, that two or three are fiue. If a man ſhould ſay, *This wall is white*, therefore *this wall is*; this conſequence were good, becauſe to be white is an accident which could not be, if the ſubject

were

were not. But if one ſhould ſay, *Philip is dead*, therefore *Philip is*; the conſequence were not good: becauſe that to be dead is not an accidēt, but a privation, which preſuppoſeth that the ſubject, namely, *Philip*, was, but now is no more. Whoſoever therefore argueth thus, divideth that which cannot be true except it be joyned. This diviſion may happen ſometimes in one word only. As, *Ingenioſus*, being taken for one word is a commendation, but divided into two, as, *Ingenio ſus*, it is a reproach.

5. *Of the fallacie in the Accent or Pronuntiation.*

The fallacie in the Accent is, when a falſe thing is affirmed vnder colour of pronouncing it as another thing that is true. For example,

Where no ach is, there needs no ſalue.
In the Gout *there is no* H.
Therefore *in the* Gout *there needs no ſalue.*

Againe, if a man ſhould ſay, *I am hot; are you as hot?* Or, *I am cold; are you*

as cold? A man cannot diſtinguiſh in faſt ſpeaking of it, whether he ſaith *a ſot*, in ſtead of *as hot*; Or, *a ſcould* in ſtead of *as cold*. But being written a man ſhall eaſily perceiue this fallacie.

This fallacie is alſo cõmitted when that which is ſpoken poſitiuely, is taken as if it were ſpoken by Interrogation. As if a man commanding ſay to another, *Reſt you*, and he taking it Interrogatiuely ſhould anſwer; *No.*

6. *Of the fallacie in the Figure of the word.*

The fallacie in the figure of the word is, when from the Gender or Number of the word, or becauſe the Verbe is Actiue or Paſſiue, a man will inferre that the nature of the thing is ſuch. For example, if a man ſhould argue, that Prudence, Temperance, or Iuſtice are onely proper and peculiar vnto women, becauſe they are of the feminine gender, which no way followeth. So likewiſe, becauſe to heare and to ſee be not Paſſiues, it follow-

eth

eth not, that therfore hearing and seeing are no Passiues. And although I say, that I haue receiued letters from my brother, it followeth not, that I haue receiued more then one, though the word be Plurall.

The second Chapter.

Of Fallacies in the Matter.

THere are seaven fallacies in the Matter; that is to say, when the deceipt lyeth not in the words, but in the ignorance or disguising of the thing. These fallacies are, 1. The fallacie by Accident. 2. The fallacie which taketh a thing as spoken simply or absolutely, which is true onely in some respect. 3. The Supposing of that which is in question. 4. The fallacie of Inconsequence. 5. The fallacie whereby a thing is taken for a cause which is not a cause. 6. The fallacie which mingleth divers questions as if they were but one. 7. The Ignorance of that which contradicteth the question.

The third Chapter.

The fallacie by Accident.

THe fallacie by Accident is, when from an assumption which is true onely by accident a conclusion is drawne which is absolute, simple, and without restraint. As in this argument:

That which stirres vp troubles in a Common-wealth is pernicious.

The Gospell stirres vp troubles in a Common-wealth.

Therefore *the Gospell is pernicious.*

Thus the Sunne darkeneth the eye-sight: and the law of God hardeneth the sinner. Whence if a man would inferre, that the Sunne were the cause of darkenesse, or, that the Law were the cause of sinne, he should fall into the fallacie of the Accident. For the Gospell of it owne nature stirreth vp no troubles, seing it preacheth peace: but men take occasion thereby to rise vp against it. Neither doth the Sunne blind

blind the eyes by nature, but by accident, when it meeteth with a weake eye-sight.

The fourth Chapter.

The fallacie which taketh a thing as simply true, which is not so, but onely in some respect.

THis fallacie is committed, when one of the propositions being true onely in part, or in some respect, wee labour to draw from thence a conclusion to make it true at all times, in all respects, and in every part. As,

Every good thing is to be desired.
Wealth is a good thing.
Therefore *wealth is to be desired.*

The assumption is true in some respect onely, and to some men. For riches are not good, but to good men, and to such as can vse them well. And so in this Syllogisme:

He that is borne of a woman had a beginning.
Our Saviour Christ was borne of a woman.

Therefore *our Saviour Christ had a beginning.*

The fift Chapter.

Of the Supposing of that which is in Question.

VVE suppose that which is in question, when wee make a Syllogisme, wherein one of the propositions is the same thing which is in question, though it be couched in other termes. As if I would proove that the world was not *created*, because God *made* it not. Or, if I would proue that men are *iust*, because they are *without sinne*; that were to proue a thing by it selfe.

The sixt Chapter.

Of the fallacie of Inconsequence.

THe fallacie of Inconsequence is, when we breake the rules which are set downe in the Chapter of the conversion of Enuntiations, and in the

the Chapter of Hypotheticall Syllogiſmes. For example, wee ſaid in the fourth Chapter of the third Booke, that an vniverſall affirmatiue enuntiation cannot be converted into any other propoſition, but into a particular affirmatiue, or into an vniverſall, having two negatiues As, *All men are living creatures*, is thus converted; *Some living creature is a man*: Or into this, *Whatſoever is not a living creature is not man.*

Againe, we ſaid that in Hypotheticall Syllogiſmes we may proceede from the eſtabliſhing of the Antecedent, to the eſtabliſhing of the Conſequent: And that we may proceede from the over-throwing of the Conſequent to the over-throwing of the Antecedent.

Now if any would diſpute contrary to theſe Rules, ſaying, *All men are living creatures*; therefore *all living creatures are men.* Or, *All men are living creatures*; therefore *all that is not man is not a living creature*, he ſhould fall into the fallacie of a bad Conſequence.

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The ſame fallacie is committed if you argue thus,

If Bucephalus be a man, he is a living creature.

But he is a living creature.

Therefore *he is a man.*

Or thus,

If Bucephalus be a man, he is a living creature.

But he is not a man.

Therfore *he is not a living creature.*

For ſuch arguments are againſt the rules of Hypotheticall Syllogiſmes, ſet downe in the thirteenth Chapter of the fourth Booke.

The ſeaventh Chapter.

The fallacie whereby a thing is taken for a cauſe, which is none.

THe fift fallacie is, when you alledge a Meane which ſeemeth to be the cauſe of the concluſion, but indeed is not. Such was the anſwer of a certaine Pyrate to *Alexander* the great: who having asked of him what had made him a Pyrate; he anſwered, that

that he was a Pyrate, because he had but one Fregat or small Barke; but if he had two hundred Gallies, as *Alexander* had, that then hee should be a King. Such also are these proofes. The Church of *Greece* is the *best*, because it is the *greatest*. Or, This man is *learned* because he hath *many books*. Or, that *Charles* hath *a grey beard*, because *he was not hanged ten yeares agoe*. Here the ordinary fault is, when the occasion is taken for a cause. For causes doe act, but occasions act not; but are onely the subject and matter of acting. Thus truth breeds hatred, not of it owne nature, but by occasion. So the Law of God hardeneth the hearts of wicked men that oppose thēselues against it. It is not the cause of the hardnesse, but onely the occasion.

The eight Chapter.

Of the fallacie which mingleth many Interrogations, as if they were but one.

SOmetimes many Interrogations are cunningly entermingled, that an

an vntruth may be crowded in amongſt many truths. As, *Cyrus, Alexander, Cæſar were they not valiant Kings?* Or, *theſe qualities, to be bay, olde, tall, one-eyde, are they not in this horſe?*

Some will be ready to grant all this, not marking that *Cæſar* was never King; and that to be one-eyde is a privation, and not a qualitie; and that to be olde is not a qualitie, but a quantitie or length of time paſt. Therefore ſuch Interrogations muſt be anſwered by diſtinction.

The ninth Chapter.

Of the fallacie which is committed by the Ignorance of that which contradicteth the Queſtion.

THe fallacie through the Ignorance of that which contradicteth, is, when he that argueth againſt me brings a concluſion which he alledgeth as contrary or contradictorie to my poſition, which notwithſtanding is nothing prejudiciall vnto it, and

and may be granted. For example, if I say that *God is no lyar*; a Sophister will goe about to conclude, that God saith not all the truth: which notwithstanding agrees very well with that which I affirme; neither doth it from thence follow that God is a lyar.

To the end therefore that these be not taken for contradictorie or contrarie Enuntiations, which indeed are not: we must vnderstand that if we will make two Enuntiations to be cõtradictorie, the termes must be vnderstood in the same sense in both, and without equivocation. Therfore these two Enuntiations, *Every Cocke is living*, and, *Every Cocke is not living*, are not contradictorie: if the one be meant of a living creature, and the other taken for the cocke of a Gunne. 1.

Againe, the attribute must agree with the subject in the same part, & according to the same time. Therefore these two Enuntiations, *Man is mortall*; and, *Man is immortall*, are not contradictorie: if the one be vnderstood of the body; and the other of 2.

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the ſoule of man. And, *The Grecians were valiant*, contradicteth not this, *The Grecians were not valiant*, for both are true, if you conſider them at ſeverall times.

3. Againe, the attribute of the Enuntiation muſt not be vnderſtood in diuers reſpects. For *Cicero is of great ſtature*; and, *Cicero is not of great ſtature*, may both be true, if *Cicero* be compared to divers perſons: little in comparison of a giant, and great in comparison of a dwarfe.

The tenth Chapter.

Of the faults in Syllogiſmes.

GEnerally all Syllogiſmes may be faultie, either in the forme, or in the matter. They are faultie in the Forme, when the rules of the figures are not obſerved, committing a fault, either in the quantitie, or qualitie, or the propoſitions, or in the placing of the Meane, or if there be more then three termes.

The Syllogiſme is faultie in the Matter,

Matter, when one of the propoſitiõs, or both, are falſe, either in the whole, or in part. This fault in eſſe happeneth ſometimes through ſimplicitie, and without cunning, but ſometimes it is fraudulent and with cunning; ſuch as are the fallacies aboue mentioned. If a Syllogiſme be faulty in the forme, it muſt be brought to the true forme. If it be faulte in the matter, that propoſition which is falſe muſt be denied. And if it be doubtfull or true in part onely, it muſt be diſtinguiſhed.

But if the fault be neither in the forme, nor in the matter, but onely in the fallacie of the ignorance of that which contradicteth the queſtion, by the which the adverſary maintaineth a thing which doth not prejudice the queſtion; in ſuch a caſe wee muſt grant all that the adverſary ſaith, and ſhew him, that in thinking to contradict vs, he doth it not.

The end and ſcope of theſe fallacies, is not to teach vs how to deceiue, but how to avoide deceipt.

FINIS.

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